Anadromous Salmonid Protection ~~Threatened of Impaired Watershed~~ Rules, 2009

[Originally Published May 8, 2009]

[Re-noticed pursuant to GC 11346.8 (c) on July 24, 2009]

Title 14 of the California Code of Regulations (14 CCR):

Amend:

§ 895	Abbreviations Applicable Throughout the Chapter.
§ 895.1	Definitions.
§ 898	Feasibility Alternatives.
§ 914.8 [934.8, 954.8]	Tractor Road Watercourse Crossing.
§ 916.5 [936.5, 956.5].	Procedure for Determining Watercourse and Lake Protection Zone (WLPZ) Widths and Protective Measures
§ 916 [936, 956]	Intent of Watercourse and Lake Protection.
§ 916.2 [936.2, 956.2]	Protection of the Beneficial Uses of Water and Riparian Functions.
§ 916.9 [936.9, 956.9]	Protection and Restoration in Watersheds with Threatened or Impaired Values.
§ 916.11 [936.11, 956.11]	Effectiveness and Implementation Monitoring.
§ 916.12 [936.12, 956.12]	Section 303(d) Listed Watersheds.
§ 923.3 [943.3, 963.3]	Watercourse Crossings.
§ 923.9 [943.9, 963.9]	Roads and Landings in Watersheds with Threatened or Impaired Values.
§ 916.9.1 [936..9.1]	Protection Measure in Watersheds with Coho Salmon.
§ 916.9.2 [936.9.2]	Measures to Facilitate incidental Take Authorization in Watersheds with Coho Salmon.
§ 923.9.1 [943.9.1]	Measures for Roads and Landings in Watersheds with Coho Salmon.

Amend 14 CCR § 895. Abbreviations Applicable Throughout Chapter.

The following abbreviations are applicable to throughout this chapter:

~~***[OPTIONAL AMENDMENT 1 ACD*** *Angular Canopy Density**]***~~

B & M Baseline and*****

*****cm** Centimeter(s)

CMZ Channel Migration Zone

dbh The average diameter.*****

*****PTHP** means*****

QMD Quadratic Mean Diameter

R Range*****

*****WLPZ** Watercourse and Lake Protection Zone

WTL Watercourse Transition Line****

Note: Authority cited: Sections 4551, 4551.5 and 21082, Public Resources Code. Reference: Sections 4511, 4512, 4513, 4521.3, 4522, 4522.5, 4523-4525, 4525.3, 4525.5, 4525.7, 4526, 4526.5, 4527, 4527.5, 4528, 4551, 4551.5, 4552, 4582 and 21080.5, Public Resources Code.

Amend 14 CCR § 895.1. Definitions.

Alternate Prescription *****

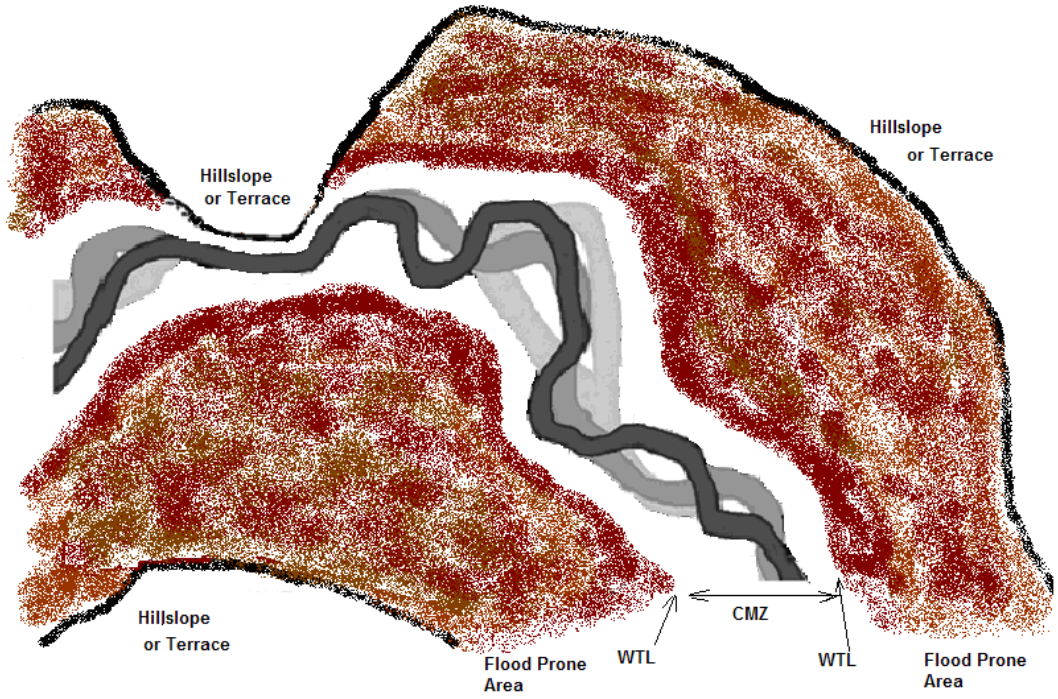
~~*****[***OPTIONAL AMENDMENT 2 Angular Canopy Density** *means the portion of the sky occupied by canopy along the sun's path between 10 a.m. and 2 p.m. (pacific standard time) in mid to late summer (i.e., July and August). ACD is measured in the thalweg of the watercourse channel, or along the streambank if wading is not possible. Several different types of instruments can be used to measure ACD including the spherical densiometer, but the Solar Pathfinder is preferred. ACD is determined by counting the numbers of squares or fractions of squares displayed when using a canopy measuring device and converting the number to a percentage.**]***~~

Approved and legally permitted structure means***

*****__Canopy__ means*****

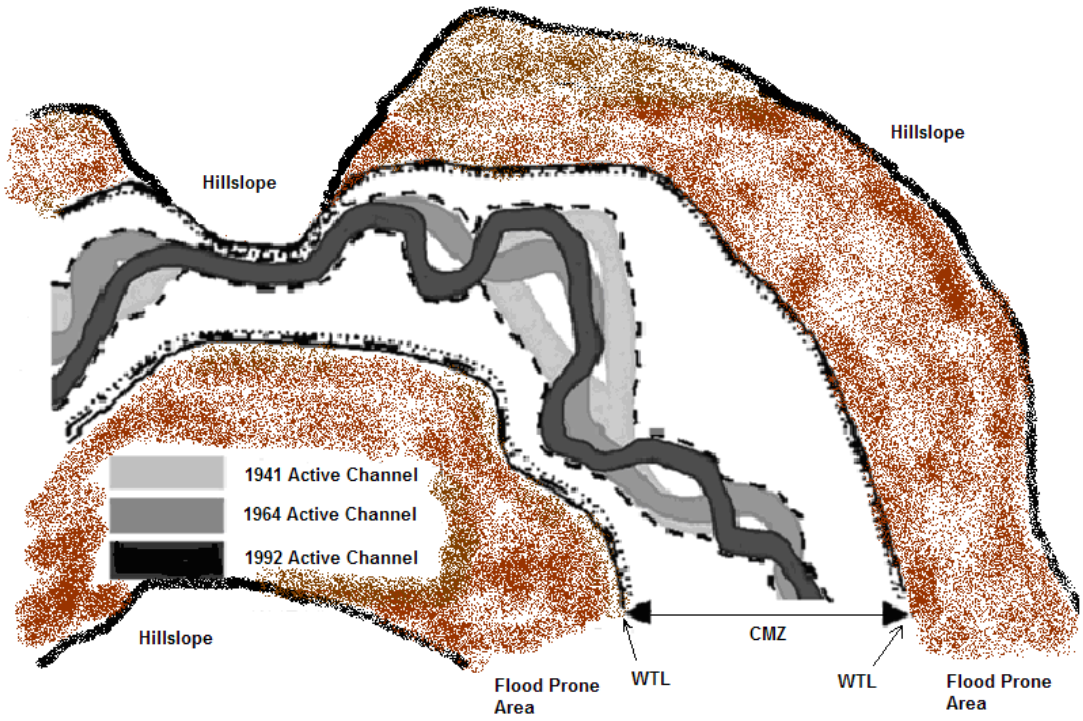
__**Channel Migration Zone** means the area where the main channel of a watercourse can reasonably be expected to shift position on its floodplain laterally through avulsion or lateral erosion during the period of time required to grow forest trees from the surrounding area to a mature size, except as modified by a permanent levee or dike. The result may be the loss of beneficial functions of the riparian zone or riparian habitat (see Figure 1).__

Figure 1. Plan view diagram of a simple Channel Migration Zone designation.



~~*****Channel Migration Zone means the area on both sides of a watercourse's active channel where the main channel of a watercourse shifts position on its floodplain laterally through avulsion or lateral erosion. This results in a potential loss of riparian habitat and the beneficial functions of the riparian zone adjacent to the watercourse for a period of approximately 80 years, except as modified by a permanent levee or dike . CMZs tend to be more common where the valley floor is more than four (4) times the width of the channel zone.~~ ~~(See Figure 1).~~

~~Figure 1. Plan view diagram of a simple Channel Migration Zone designation.~~ Note: Graphic deleted



Channel zone means that area ~~that includes a watercourse's channel at bankfull stage and a watercourse's floodplain, encompassing the area~~ located between the watercourse transition lines.

Coastal Commission Special treatment area means*****

*****__Confidential Archaeological Letter__ means*****

*****__Confined Channel__ means a watercourse with an incised channel that does not shift position on a floodplain, the channel has no contiguous flat, flood prone areas, and the width of the valley floor is less than 2 times the channel width at bankfull stage.

Countable Tree means *****

*****__Feasible means__*****

~~*****Fifty-Year Flood Flow means that magnitude of peak flow which one would expect to be equaled or exceeded, on the average, once every 50 years. This flow shall be estimated by empirical relationships between precipitation and watershed characteristics and run off and then may be modified by direct channel cross-section measurements and local experience.~~

Fill means*****

*****__Fire Protection Zone__ (For the Coast*****

*****__Flood Flow__ means that magnitude of peak flow that would, on the average, be equaled or exceeded once every specified period of years (e.g. once every 10 year, 50 years, 100 years). This flow shall be estimated by flood flow measurement records and ~~relationships~~ by empirical relationships between precipitation, watershed characteristics, and runoff, and may be modified by direct channel cross-section measurements informed by ~~and~~ local experience.

__Flood Prone Area__ means an area contiguous to a watercourse channel zone that is periodically flooded by overbank flow. Indicators of flood prone areas may include diverse fluvial landforms, such as overflow side channels or oxbow lakes, hydric vegetation, and deposits of fine-grained sediment between duff layers or on the bark of

hardwoods and conifers. The outer boundary of the flood prone area may be determined by field indicators such as the location where valley slope begins (i.e., where there is a substantial percent change in slope, including terraces, the toes of the alluvial fan, etc.), a distinct change in soil/plant characteristics, and the absence of silt lines on trees and residual evidence of floatable debris caught in brush or trees. Along laterally stable watercourses lacking a channel migration zone ~~W~~where the outer boundary of the flood prone area cannot be clearly determined using the field indicators above~~;~~ it shall be determined based on the area inundated by a 20-year recurrence interval flood flow event, or the elevation equivalent to twice the distance between a thalweg riffle crest and the depth of the channel at bankfull stage. When both a channel migration zone and flood prone area are present, the boundaries established by the channel migration zone supersedes the establishment of a flood prone area.

Fluvial means the processes associated with rivers and streams and the deposits and landforms created by them.

Fuelbreak see PRC*****

*****Historic Road** means*****

Hydric means a soil that formed under conditions of saturation, flooding,or ponding long enough during the growing season to develop anaerobic conditions in the upper portions of the soil profile.

Hydrologic Disconnection means the removal of direct routes of drainage or overland flow of road runoff to a watercourse or lake by directing drainage or overland flow onto stable portions of the forest floor to dissipate energy, facilitate percolation, and resist or prevent erosion or channelization.

Inner Gorge means*****

*****Lake Tahoe region** means*****

Lake Transition Line means that line closest to the lake where mesic ~~riparian~~ vegetation is permanently established.

*****Landing** means*****

*****Predominant Trees** means*****

*****Pre-existing Large Wood** means, for Class III watercourses in watersheds with listed anadromous salmonids:

(a) a log or tree segment that is (i) at least 12 inches or greater in diameter outside bark when measured at the small end, (ii) at least six feet in length, (iii) in contact with the ground, and (iv) present prior to timber operations.

(b) a root wad that is (i) at least 12 inches or greater in diameter outside bark when measured at the base of the trunk, (ii) in contact with the ground, and (iii) present prior to timber operations.

*****Prescribed Maintenance Period** means*****

*****Project** means*****

***** **Properly Functioning Salmonid Habitat** means the beneficial functions of the riparian zone are suitable for all life-history~~lifecycle~~ stages of listed anadromous salmonid species that would be expected to occur in specific geomorphic conditions considering spatial and temporal variability.

Public Fire Agency means*****

*****Riparian** means*****

*****Riparian-Associated Species** means those plant, invertebrate, amphibian, reptile, fish, or terrestrial wildlife species that require utilization of ~~the~~ riparian zones ~~areas~~ during any life history stage ~~at least one critical life stage~~.

Rip Rap means*****

*****Saturated soil conditions** means that ~~site conditions are sufficiently wet that timber operations displace soils in yarding or mechanical site preparation areas or displace road and landing surface materials in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or in downstream Class I, II, III, or IV waters that is visible or would violate applicable water quality requirements.~~

~~In yarding and site preparation areas, this condition may be evidenced by: a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, b) inadequate traction without blading wet soil, c) soil displacement in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I, II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or d) creation of ruts greater than would be normal following a light rainfall.~~

~~On logging roads and landing surfaces, this condition may be evidenced by a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, b) inadequate traction without blading wet soil, c) soil displacement inamounts that cause visible increase in turbidity of the downstream waters in receiving Class I, II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, d) pumping of road surface materials by traffic, or e) creation of ruts greater than would be created by traffic following normal road watering, which transports surface material to a drainage facility that discharges directly into a watercourse. The Soils or road and landing surfaces that are hard frozen are excluded from this definition. all~~ soil and/or surface material pore spaces are filled with water to such an extent that ~~and~~ runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces

under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Scattered Parcels means*****

*****Spotted Owl Resource Management Plan** means*****

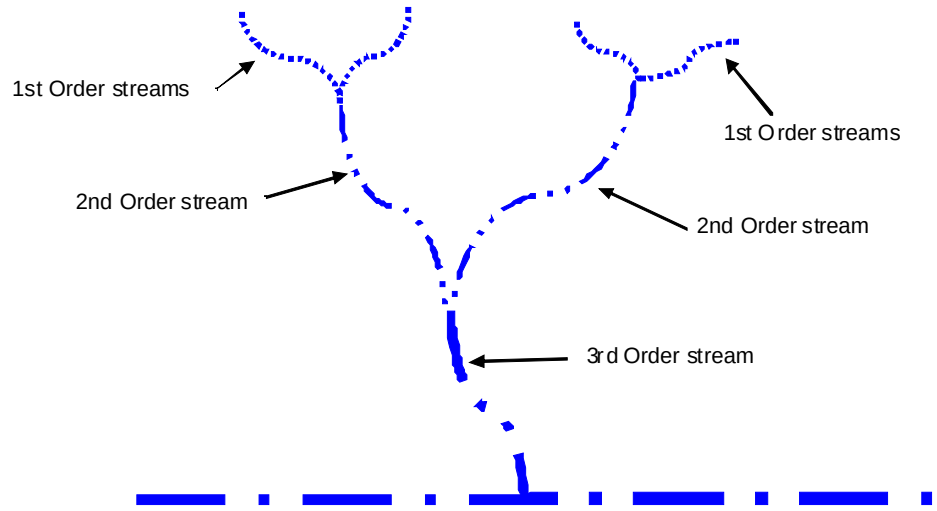
*****Stable operating surface** means ~~that throughout the period of use, the operating surface of a logging road or landing does not either (1) generate waterborne sediment in amounts sufficient to cause a turbidity increase in downstream Class I, II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters or, that is visible or would violate applicable water quality requirements; or (2) channel water for more than 50 feet that is discharged into Class I, II, III, or IV waters.~~a road or landing surface that can support vehicular traffic and has a structurally sound road base appropriate for the type, intensity and timing of intended use. ~~***[OPTIONAL AMENDMENT 3 (adds phrase) . and routes water off of the surface sufficiently to avoid large ponding of water.]***~~

Stand Vigor is*****

*****Stream** see*****

*****Stream Order** means a classification method based on the branching pattern of watercourses in a watershed. As watercourses of equal order meet, they combine to form a watercourse of the next higher order. A first order watercourse is defined as the smallest unbranched watercourse in the headwaters of a watershed (usually an ephemeral channel). When two first order watercourse channels join, they form a second order watercourse. Similarly, when two second order watercourses join, they form a third order watercourse (See Figure 2).

Figure 2: Plan view of stream order delineation



~~**Stressing Storm** means a storm that yields at least a ten year flood flow. ****~~

Substantial adverse change means*****

*****Temporary Road** means*****

Thalweg riffle crest means the upstream end of a riffle feature and can be identified as the area where the surface water flow changes from smooth to turbulent. The thalweg is found at the deepest part of the channel. Where the thalweg is measured in a pool, the riffle crest is a high point on a longitudinal profile and the shallowest place at the downstream end of a pool.

THP means*****

*****Watercourse Bank** means*****

~~*****Watercourse or Lake Transition Line~~

~~(a) for a watercourse with an unconfined channel (a channel with a valley to width ratio at bankfull stage of 4 or greater) means that line defined by the landward margin of the~~

~~most active portion of the channel zone area readily identified in the field by riverine hardwood and conifer trees at least twenty five years in age at breast height.~~

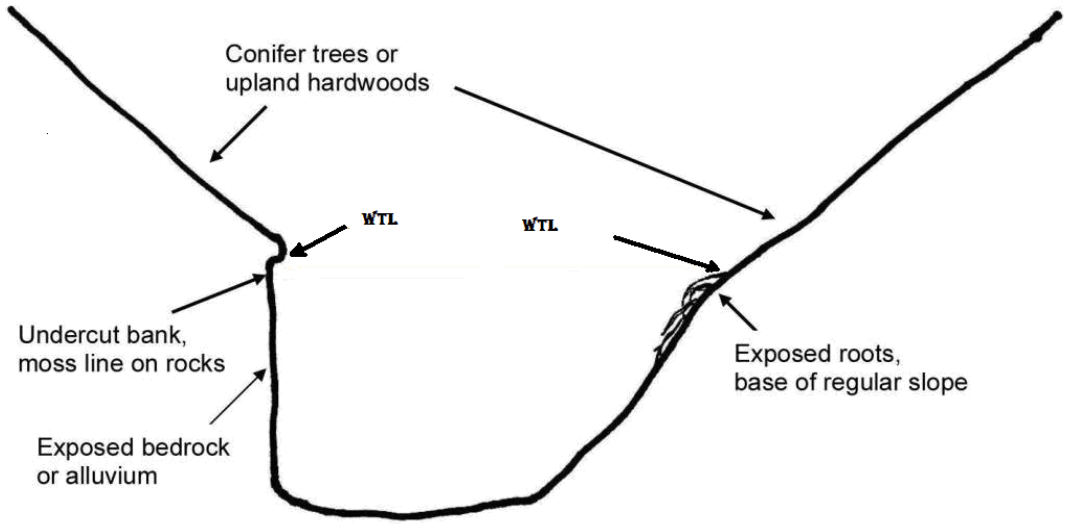
~~(b) for a watercourse with a confined channel means that line that is the outer boundary of a watercourse's 20-year return interval flood event floodplain. The outer boundary corresponds to an elevation equivalent to twice the maximum depth of the adjacent riffle at bankfull stage. The bankfull stage elevation shall be determined by field indicators and may be verified by drainage area/bankfull discharge relationships.~~

~~(c) For a lake, it is that line closest to the lake where riparian vegetation is permanently established.~~

Watercourse Transition Line

Watercourse Transition Line (a) for a watercourse without a CMZ, means the line defined by one or more the following features: 1) a change of vegetation from bare surfaces or annual water tolerant species to perennial water tolerant or upland species at least 25 years in age at breast height, 2) physical indicators of scour such as undercut banks, moss lines on rocks, the top of exposed roots along the channels, and 3) a change in the size distribution of surface sediments from gravel to fine sand.

Figure 3. Indicators for determining a Watercourse Transition Line



~~Figure 3A. Indicators for determining a Watercourse Transition Line~~

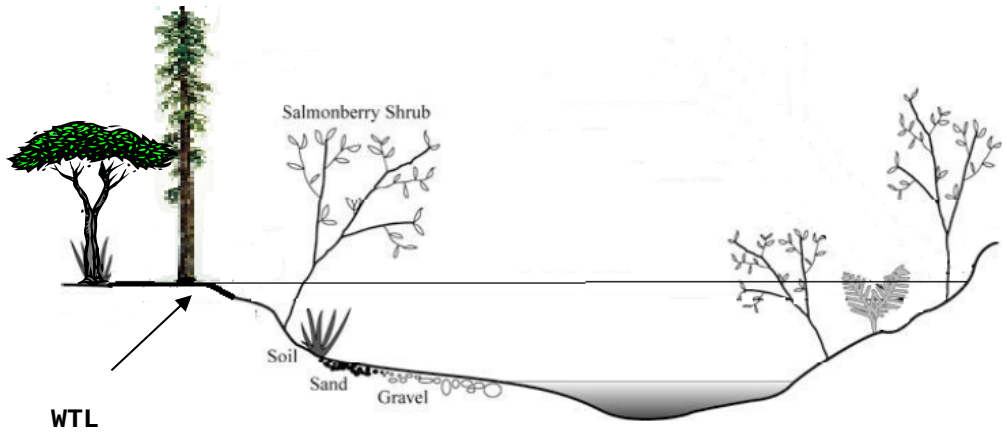
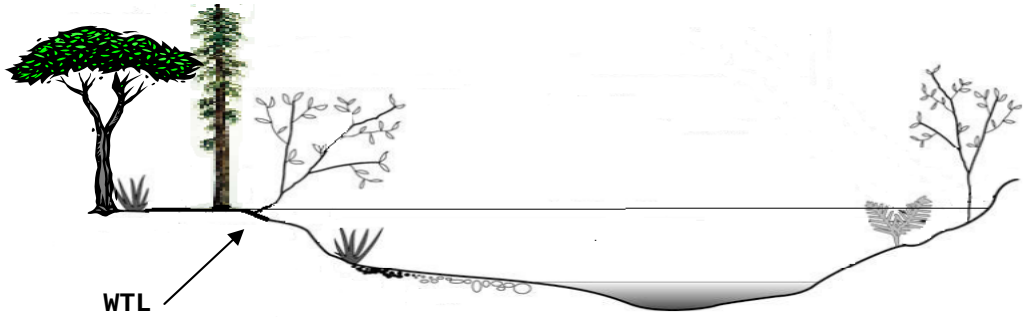


Figure 3A. Indicators for determining a Watercourse Transition Line



***** **Watersheds in the ~~coho salmon ESU~~ Coastal Anadromy Zone** means any planning watershed(s) in the ~~coho salmon (Oncorhynchus kisutch) Evolutionary Significant Units (ESU),~~Central California Coast coho salmon Evolutionary Significant Units (ESU), South Central Steelhead Distinct Population Segment (DPS), Central California Coast steelhead DPS, Northern California steelhead DPS, California Coastal Chinook salmon ESU, and Southern Oregon/Northern California Coast coho salmon ESU, as defined in 70 Federal Register 37160, dated June 28, 2005, where ~~populations of any anadromous~~ salmonids ~~(including central California coast coho, southern Oregon/northern California coast coho, northern California steelhead, central California coast steelhead, and central California coast chinook) that are~~ listed as threatened, endangered, or candidate under the State or Federal Endangered Species Acts are currently present or can be restored. Official maps of ~~coho salmon~~ ESUs and DPSs are found at http://swr.nmfs.noaa.gov/recovery/Salm_Steel.htm. as published on January 1, 2010.

Watersheds with Coho Salmon means *****

Watersheds with listed anadromous salmonids ~~threatened or impaired values~~ means any planning watershed where populations of anadromous salmonids that are listed as ~~T~~threatened, endangered, or candidate under the State or Federal Endangered Species Acts ~~with their implementing regulations~~, are currently present or can be restored.

Wet Meadow and other wet areas means*****

*****Winter Period** means the period between November 15 to April 1, except ~~1)~~ as noted under special County Rules at 14 CCR, Article 13 § 925.1, 926.18, 927.1, and 965.5, ~~; and 2) from October 15 to May 1 in watersheds with listed anadromous salmonids pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (l).~~

Woody debris means*****

*****~~The amendments to 14 CCR § 895.1 adopted on March 15, 2000 and April 4, 2000, which became effective July 1, 2000, shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551, 4551.5, 4553, 4561, 4561.5, 4561.6, 4562, 4562.5, 4562.7 and 4591.1, Public Resources Code. Reference: Sections 4512, 4513, 4526, 4551, 4551.5, 4561, 4561.6, 4562, 4562.5, 4562.7, 4583.2, 4591.1, 21001(f), 21080.5, 21083.2 and 21084.1, Public Resources Code; CEQA Guidelines Appendix K (printed following Section 15387 of Title 14 Cal. Code of Regulations), and Laupheimer v. State(1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

Amend 14 CCR § 898. Feasibility Alternatives.

After considering the rules of the Board and any mitigation measures proposed in the plan, the RPF shall indicate whether the operation would have any significant adverse impact on the environment. On TPZ lands, the harvesting per se of trees shall not be presumed to have a significant adverse impact on the environment. If the RPF indicates that significant adverse impacts will occur, the RPF shall explain in the plan why any alternatives or additional mitigation measures that would significantly reduce the impact are not feasible.

Cumulative impacts shall be assessed based upon the methodology described in Board Technical Rule Addendum Number 2, Forest Practice Cumulative Impacts Assessment Process and shall be guided by standards of practicality and reasonableness. The RPF's and plan submitter's duties under this section shall be limited to closely related past, present and reasonably foreseeable probable future projects within the same ownership and to matters of public record. The Director shall supplement the information provided by the RPF and the plan submitter when necessary to ~~i~~ensure that all relevant information is considered.

When assessing cumulative impacts of a proposed project on any portion of a waterbody that is located within or downstream of the proposed timber operation and that is listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the degree to which the proposed operations would result in impacts that may combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse effect on the environment. The plan preparer shall provide feasible mitigation measures to reduce any such impacts from the plan to a level of insignificance, and may provide measures, insofar as feasible, to help attain water quality standards in the listed portion of the waterbody.

The Director's evaluation of such impacts and mitigation measures will be done in consultation with the appropriate RWQCB.

~~When assessing cumulative impacts of a proposed project on any portion of a waterbody that is located within or downstream of the proposed timber operation and that is listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the degree to which the proposed operations would result in impacts that may combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse effect on the environment. The plan preparer shall provide feasible mitigation measures to reduce any such impacts from the plan to a level of insignificance, and may provide measures, insofar as feasible, to help attain water quality standards in the listed portion of the waterbody.~~

~~The Director's evaluation of such impacts and mitigation measures will be done in consultation with the appropriate RWQCB.~~

~~(a) The amendments to 14 CCR § 898 that became effective July 1, 2000 shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551 and 4553, Public Resources Code. Reference: Sections 4512, 4513, 4551.5 and 4582.75, Public Resources Code; and Laupheimer v.State (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

Amend 14 CCR § 914.8. [934.8, 954.8] Tractor Road Watercourse Crossing.

Watercourse crossing facilities on tractor roads shall be planned, constructed, maintained, and removed according to the following standards:

(a) The number of crossings shall be kept to a minimum. Existing crossing locations shall be used wherever feasible.

(b) A prepared watercourse crossing using a structure such as a bridge, culvert, or temporary log culvert shall be used to protect the watercourse from siltation where tractor roads cross a watercourse in which water may be present during the life of the crossing.

(c) Crossing facilities on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and for unrestricted passage of water. Such crossing facilities shall be fully described in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.

(d) Watercourse crossing facilities not constructed to permanent crossing standards on tractor

roads shall be removed before the beginning of the winter period. If a watercourse crossing is to be removed, it shall be removed in accordance with 14 CCR § 923.3 [943.3, 963.3], subsection (d) [~~943.3(d), 963.3(d)~~].

(e) If the watercourse crossing involves a culvert, the minimum diameter shall be stated in the THP and the culvert shall be of a sufficient length to extend beyond the fill material.

(f) Consistent with the protection of water quality, exceptions may be provided through the Fish and Game Code and shall be indicated in the plan.

~~**(g)** The amendments to 14 CCR § 914.8 [934.8, 954.8] that became effective July 1, 2000 shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551, 4551.5 and 4553, Public Resources Code. Reference: Sections 4512, 4513, 4527, 4562.5, 4562.7 and 4582, Public Resources Code.

Amend 14 CCR § 916. [936, 956] Intent of Watercourse and Lake Protection.

The purpose of this article is to ensure that timber operations do not potentially cause significant adverse site-specific and cumulative impacts to the beneficial uses of water, native aquatic and riparian-associated species, and the beneficial functions of riparian zones; or result in an unauthorized take of listed aquatic species; ~~are protected from potentially significant adverse site-specific and cumulative impacts associated with timber operations~~ , or threaten to cause violation of any applicable legal requirements. This article also provides protection measures for application in watersheds with listed anadromous salmonids and watersheds listed as water quality limited under Section 303(d) of the Federal Clean Water Act.

It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing ~~equal~~ appropriate levels of consideration for the quality and beneficial uses of water relative to that productivity.

Further, it is the intent of the Board to clarify and assign responsibility for recognition of potential and existing impacts of timber operations on watercourses and lakes, native aquatic and riparian-associated species, and the beneficial functions of riparian zones

and to ensure ~~adoption of~~ all plans, exemptions and emergency notices employ ~~contain~~ feasible measures to effectively achieve compliance with this article.

Further, it is the intent of the Board that the evaluations that are made, and the measures that are taken or prescribed, be documented in a manner that clearly and accurately represents those existing conditions and those measures. "Evaluations made" pertain to the assessment of the conditions of the physical form, water quality, and biological characteristics of watercourses and lakes, including cumulative impacts affecting the beneficial uses of water on both the area of planned logging operations and in the Watershed Assessment Area (WAA). "Measures taken" pertain to the procedures used or prescribed for the restoration, enhancement, and maintenance of the beneficial uses of water.

All provisions of this article shall be applied in a manner, which complies with the following:

(a) During and following timber operations, the beneficial uses of water, native aquatic and riparian-associated species, and the beneficial functions of riparian zones shall be maintained where they are in good condition~~,~~ and protected where they are threatened~~,~~. ~~and~~ ~~i~~Insofar as feasible, native aquatic and riparian-associated species and the beneficial functions of riparian zones shall be restored where they are impaired.

(b) Maintenance, p~~P~~rotection, and contribution towards restoration of the quality and beneficial uses of water during the planning, review, and conduct of timber operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan ~~or water quality control policy~~ adopted or approved by the State Water Resources Control Board~~, as these are typically interpreted and applied by the affected regional water quality control board~~. At a minimum, the LTO shall not ~~At a minimum, the LTO shall not do either of the following during timber operations:~~

~~**(1)** Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited~~

~~to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;~~

~~(1)~~**(2)** Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood prone areas ~~flood plain~~ in quantities deleterious to fish, wildlife, beneficial functions of riparian zones**,** or the quality and beneficial uses of water.~~=~~

(c) Protecting and restoring native aquatic and riparian-associated species, the beneficial functions of riparian zones, and the quality and beneficial uses of water shall be given equal consideration as a management objective within any prescribed WLPZ and within any ELZ or EEZ designated for watercourse or lake protection and any other location where timber operations may affect riparian zones or the quality and beneficial uses of water.

(d) The measures set forth in this Section are meant to enforce the public's historical and legal interest in protection for wildlife, fish, and water quality and are to be used to guide timberland owners in meeting their legal responsibilities to protect public trust resources.

~~**(e)** The amendments to 14 CCR § 916 [936, 956] that became effective July 1, 2000 shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4512, 4513, 4551.5, 4552, 4562.5, 4562.7, 21001(b), (f), 21002 and 21002.1, Public Resources Code; and Sections 100, 1243, 1243.5, 13001, 13050(f), 13146 and 13147, Water Code.

Amend 14 CCR § 916.2. [936.2, 956.2] Protection of the Beneficial Uses of Water and Riparian Functions.

(a) The measures used to protect each watercourse and lake in a logging area shall be determined by the presence and condition of the following values:

(1) The existing and restorable quality and beneficial uses of water as specified by the

applicable water quality control plan and as further identified and refined during preparation and review of the plan.

(2) The existing and restorable uses of water for fisheries as identified by the DFG or as further identified and refined during preparation and review of the plan.

(3) ~~Riparian habitat~~ The beneficial functions of the riparian zone that provides for the biological needs of native aquatic and riparian-associated species as specified in 14 CCR § 916.4~~(b)~~ [936.4~~(b)~~, 956.4~~(b)~~] subsection (b) and 14 CCR § 916.9 [936.9, 956.9] when the plan is in a planning watershed with listed anadromous salmonids.

(4) Sensitive conditions near watercourses and lakes as specified in 14 CCR § 916.4~~(a)~~ [936.4~~(a)~~, 956.4~~(a)~~] subsection (a).

The maintenance, ~~P~~protection, and contribution towards restoration of ~~T~~these values shall be ~~protected from potentially significant adverse impacts from timber operations and restored to good condition, where needed,~~ achieved through a combination of the rules and plan-specific mitigation. The RPF shall propose, and the Director may require, adequate protection of overflow and changeable channels which are not contained within the channel zone.

(b) The State's waters are grouped into four classes based on key beneficial uses. These classifications shall be used to determine the appropriate ~~minimump~~protection measures to be applied during the conduct of timber operations. The basis for classification (characteristics and key beneficial uses) are set forth in 14 CCR § 916.5 [936.5, 956.5], Table 1 and the range of ~~minimum~~ appropriate protective measures applicable to each class are contained in 14 CCR §§ 916.3 [936.3, 956.3], 916.4 [936.4, 956.4], and 916.5 [936.5, 956.5] and 916.9 [936.9, 956.9] when the plan is in a planning watershed with listed anadromous salmonids.

(c) When the protective measures contained in 14 CCR §§ 916.5 [936.5, 956.5], and 916.9 [936.9, 956.9] when the plan is in a planning watershed with listed anadromous salmonids, are not adequate to provide for maintenance, protection or to contribute

towards restoration ~~to~~ of beneficial uses of water set forth in 14 CCR § 916.5 [936.5, 956.5] Table 1, ~~feasible~~ additional measures ~~as are necessary and sufficient~~ to achieve these goals shall be developed by the RPF or proposed by the Director under the provisions of 14 CCR § 916.6 [936.6, 956.6], Alternative Watercourse and Lake Protection, and incorporated in the plan when approved by the Director. ~~Additional measures taken to contribute to restoration of beneficial functions of riparian zones are those which are feasible and commensurate to the action in the plan.~~

~~**(d)** The amendments to 14 CCR § 916.2 [936.2, 956.2] that became effective July 1, 2000 shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243, 13050(f), Water Code; and Sections 1600 and 5650(c), Fish and Game Code.

Amend 14 CCR § 916.5 [936.5, 956.5]. Procedure for Determining Watercourse and Lake Protection Zone (WLPZ) Widths and Protective Measures.

The following procedure for determining WLPZ widths and protective measures shall be followed:*****

***** **(e)** The letter designations shown in the "Protective Measures and Widths" column in Table I correspond to the following:

"A" WLPZ shall be clearly identified on the ground by the RPF who prepared the plan, or supervised designee, with paint, flagging, or other suitable means prior to the preharvest inspection. For nonindustrial timber management plans, sample identification of the WLPZ prior to the preharvest inspection may be allowed. The sample shall be based upon a field examination and be consistent with the applicable provisions of 14 CCR §§ 916.4 [936.4, 956.4] and 916.5 [936.5, 956.5], representing the range of conditions found within the WLPZ. The Director shall determine if the sample identification is adequate for plan evaluation during the preharvest inspection. If sample identification is allowed, the remaining WLPZ shall be identified by an RPF or supervised designee prior to the start of timber operations within or adjacent to the WLPZ. The RPF shall notify the Department when the WLPZ has been identified.

"**B**" WLPZ shall be clearly identified on the ground by an RPF or supervised designee, with paint, flagging, or other suitable means, prior to the start of timber operations. In~~In~~ Wwatersheds with ~~threatened or impaired values~~ listed anadromous salmonids, on the ground identification of the WLPZ shall be completed prior to the preharvest inspection. For all nonindustrial timber management plans, sample identification of the WLPZ prior to the preharvest inspection may be allowed. *****

*******"C"** In site-specific cases, the RPF may provide in the plan, or the Director may require, that the WLPZ be clearly identified on the ground with flagging or by other suitable means prior to the start of timber operations.

"D" To ensure retention of shade canopy filter strip properties of the WLPZ and the maintenance of a multi-storied stand for protection of values described in 14 CCR § 916.4(b) [936.4(b), 956.4(b)], residual or harvest trees shall be marked, including a base mark below the cut-line within the WLPZ by the RPF, or supervised designee. Outside of watersheds with ~~threatened or impaired values~~ listed anadromous salmonids, sample marking prior to the preharvest inspection is satisfactory in those cases where the Director determines it is adequate for plan evaluation. *****

"E" To ensure retention of shade canopy filter strip properties of the WLPZ and the maintenance of a multi-storied stand for protection of values described in 14 CCR § 916.4(b) [936.4(b), 956.4(b)], residual or harvest trees shall be marked, including a base mark below the cut line, within the WLPZ by the RPF or supervised designee. Outside of watersheds with ~~threatened or impaired values~~ listed anadromous salmonids, tree marking shall be done prior to timber falling operations. In watersheds with ~~threatened or impaired values~~ listed anadromous salmonids, trees shall be marked in advance of the preharvest inspection. *****

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4513, 4551.5 and 21001(f), Public Resources Code; Sections 100, 13000 and 13050(f), Water Code; and 33 USC Section 1288(b)(2)(F).

Amend 14 CCR § 916.9 [936.9, 956.9]. Protection and Restoration of the Beneficial Functions of the Riparian Zone in Watersheds with Listed ~~Threatened or Impaired Values~~ Anadromous Salmonids.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any watershed with listed anadromous salmonids. Requirements of this section supersede other sections of the FPRs.

Geographic scope - ~~In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with listed threatened or impaired values anadromous salmonids. When specified in this section, rules pertaining to watersheds in the coho salmon ESU supersede requirements for watersheds with listed anadromous salmonids.~~ Requirements for watershed with listed anadromous salmonids differ depending on the geographic location of the watershed and geomorphic characteristics of the watercourse. Unique requirements for watersheds with listed anadromous salmonids are set forth for 1) watercourses in the coastal anadromy zone with confined channels, 2) watercourses with flood prone areas or channel migration zones, and 3) watercourses with confined channels located outside the coastal anadromy zone.

Watersheds which do not meet the definition of "watersheds with listed anadromous salmonids" are not subject to this section except as follows: The provisions of 14 CCR §§ 916.9 [936.9, 956.9], subsections (k)-(q), 923.3 [943, 963] and 923.9 [943.9, 963.9] also apply to planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids for purposes of reducing significant adverse impacts from transported fine sediment. Projects in other watersheds further upstream that flow into watersheds with listed anadromous salmonids, not otherwise designated above, may be subject to these provisions based on an assessment

consistent with cumulative impacts assessment requirements in 14 CCR §§ 898 and 912.9 [932.9, 952.9] and Technical Rule Addendum No. 2, Cumulative Impacts Assessment. These requirements do not apply to upstream watersheds where permanent dams attenuate the transport of fine sediment to downstream watercourses with listed anadromous salmonids.

(a) GOALoal - Every timber operation shall be planned and conducted to protect, maintain, and contribute to restoration of properly functioning salmonid habitat and listed salmonid speciesprevent deleterious interferencesignificant adverse impacts to with the watershed conditions that primarily limit the values set forth in 14 CCR 916.2 [936.2, 956.2](a) the primary limiting factors that affect listed anadromous salmonid species in a planning watershed (e.g., sediment load increase where sediment is a primary limiting factor; thermal load increase where water temperature is a primary limiting factor; loss of instream large woody debris or recruitment potential where lack of this value is a primary limiting factor; substantial increase in peak flows or large flood frequency where peak flows or large flood frequency are primary limiting factors). To achieve this goal, every timber operation shall be planned and conducted to meet the following objectives where they affect a primary limiting factor:

(1**)** Comply with the terms of a Total Maximum Daily Load (TMDL). that has been adopted to address primary limiting factors that may be affected by timber operations. if a TMDL has been adopted,, or not result in any measurable sediment load increase to a watercourse or lake.

(2) Not result in anyPrevent significant sediment load increase to a watercourse system or lake.

(2)**(**3**)** Not result in any measurablePrevent significant decrease in the instability of a watercourse channel or of a watercourse or lake bank.

~~(3)~~**(**4**)** ~~Not result in any measurable~~ Prevent significant blockage of any aquatic migratory routes for any life stage of anadromous salmonids or listed species.

~~(4)~~**(**5) ~~Not result in any measurable~~ Prevent significant adverse effects to streamflow. ~~during critical low water periods except as part of an approved water drafting plan pursuant to 14 CCR § 916.9(r) [936.9(r), 956.9(r)], subsection (r).~~

~~(5)~~**(**6**)** Consistent with the requirements of 14 CCR § 916.9~~(i),~~ [936.9,956.9], subsections (f), (g), (h) and (v), ~~14 CCR § 936.9(i), or 14 CCR § 956.9(i),~~ protect, maintain, and restore trees (especially conifers), snags, or downed large woody debris that currently, or may in the foreseeable future, provide large woody debris recruitment needed for instream habitat structure and fluvial geomorphic functions.

~~(6)~~**(**7**)** Consistent with the requirements of 14 CCR § 916.9~~(g)~~ [936.9, 956.9], subsections (f), (g), (h) and (v), ~~14 CCR § 936.9 (g), or 14 CCR § 956.9(g),~~ protect, maintain, and restore the quality and quantity of vegetative canopy needed to:

(A) provide shade to the watercourse or lake to maintain daily and seasonal water temperatures within the preferred range for anadromous salmonids or listed species where they are present or could be restored; and

(B) ~~minimize daily and seasonal temperature fluctuations~~provide a deciduous vegetation component to the riparian zone for aquatic nutrient inputs (~~C) maintain daily and seasonal water temperatures within the preferred range for anadromous salmonids or listed species where they are present or could be restored, and (D) provide hiding cover and a food base where needed~~.

~~(7)~~**(8)** ~~Result in no substantial significant~~ Prevent significant increases in peak flows or large flood frequency.

(b) Pre-plan adverse cumulative watershed effects - Pre-plan adverse cumulative watershed effects on the populations and habitat of anadromous salmonids shall be considered. The plan shall specifically acknowledge or refute that such effects exist. ~~Where appropriate~~When the proposed timber operations, in combination with any identified pre-plan watershed effects, will add to significantly~~,~~ adverse existing cumulative watershed effects, the plan shall set forth measures to effectively reduce such effects.

(c) Objectives for timber operations or silvicultural prescriptions in WLPZs - Any timber operation or silvicultural prescription within ~~150 feet of any Class I watercourse or lake transition line or 100 feet of any Class II~~ any watercourse or lake protection zone ~~transition line~~ shall have protection, maintenance, or restoration of the beneficial uses of water, and properly functioning salmonid habitat and ~~or the for populations and habitat of anadromous salmonids or~~ listed aquatic or riparian-associated species as significant objectives. Specific objectives are described below.

(1) Core Zone: The primary objective for this zone is streamside bank protection to promote bank stability, wood recruitment by bank erosion, and canopy retention. Timber operations are generally excluded from this zone and limited to actions which meet the objectives stated above or improve salmonid habitat consistent with 14 CCR § 916.9 [936.9, 956.9] subsections (a) and (c).

(2) Inner Zone: The primary objective for this zone is to develop a large number~~pool~~ of trees for large wood recruitment, to provide additional shading, to develop vertical structural diversity, and to provide a variety of species (including hardwoods) for nutrient input. This is accomplished through the establishment of high basal area and canopy retention by retaining or more rapidly growing a sufficient number of large trees. Additional specific objectives include locating large trees retained for wood recruitment nearer to the Core Zone and maintaining or improving salmonid habitat on flood prone areas and CMZs when present.

Timber operations within WLPZs are limited to those actions which meet the objectives stated above or to improve salmonid habitat consistent with 14 CCR § 916.9 [936.9, 956.9] subsection (a) and (c).

(3) Outer Zone: The primary objective for this zone~~, when needed,~~ is to buffer the Inner and Core Zones and to provide the following functions: 1) wind resistance where windthrow is common or likely to occur, 2) additional wood recruitment, 3) microclimate control in the Inner or Core Zones for purposes other than limiting water temperature change, 4) habitat for terrestrial wildlife species that depend on riparian areas, and 5) an additional sediment filter on steeper slopes with high or moderate erosion hazard rating when tractor operations are proposed.

(4) Class II large watercourses (Class II-L): The primary objective is to maintain, protect or restore the values and functions of Class II-L type watercourses described below. Class II-L type watercourses: (i) can supply water and nutrients to a Class I watercourse during the month of July during ~~an~~ a year of average precipitation and runoff as derived from long-term average precipitation ~~hydrologic year~~ data sets available from CAL FIRE, U.S. Geological Survey, or National Oceanic and Atmospheric Administration (NOAA); (ii) can supply coarse and fine sediment to the Class I channel ~~and during the average hydrologic year~~; and (iii) may be able to supply wood of a size that would function as large wood for the Class I watercourse. Recruitment, delivery and retention of large wood in Class II- L type watercourses is also critical, as large wood increases sediment storage and decreases the rate of sediment transport to fish-bearing Class I watercourses. Other objectives stated in 14 CCR § 916.9 [936.9, 956.9] subsections (c) (1) and (2) above for the Core Zone and Inner Zone are also desired objectives for Class II-L type watercourses.

~~(5) WLPZs in High or Very High Fire Hazard Severity Zones: An objective in WLPZs having conditions where catastrophic, stand replacing wildfire will result in significant adverse effects to salmonid species or riparian habitat is to create fire resilient forests that can sustain wildfire, have reduced fire intensities, and retain functional habitat following a wildfire. In areas mapped pursuant to PRC § 4203 as High or Very High Fire Hazard Severity Zones, or where other fire behavior modeling information indicates the potential for severe fire behavior and likelihood of stand replacing fires, objectives include fuel hazard reduction activities that reduce fire hazards and the potential for extreme fire behavior. Fuel reduction activities would be designed to reduce fire behavior to sustainable levels, including, but not limited to, maximum four foot flames lengths under average severe fire conditions, through a combination of activities that eliminate the vertical and horizontal continuity among all vegetative fuels layer (surface fuels, ladder fuels and crown fuels). Such treatment would result in reducing fire rate of spread, duration and intensity, and fuel ignitability. Preferred actions taken to reduce fire hazards in WLPZs are those which focus on reducing surface and ladder fuel hazards while simultaneously goals and objectives of 14 CCR § 916.9 [936.9, 956.9] subsections (a) and (c).~~

(5)~~(6)~~ A primary objective for all WLPZs is to implement practices to maintain, protect and contribute to restoration of properly functioning salmonid habitat and repair conditions detrimental to the species or species habitat. ~~where: (i) it is demonstrated that adequate bank stability, shading, and wood recruitment will be provided, and (ii) practice(s) proposed are known to address a primary limit on salmonid populations in that portion of a watershed.~~ Practices to meet this objective include, but are not limited to, thinning for increased conifer growth; felling or yarding trees for wood placement in the channel; restoration of conifer deficient areas; management to promote a mix of conifers and hardwoods, abandonment and upgrading of non- functioning or high risk roads, watercourse crossings, tractor roads, and landings; and fuel hazard reduction activities that will reduce fire hazards and stand replacing

wildfires which would result in significant adverse effects to salmonid species or riparian habitat. ~~Additionally, for evenaged regeneration methods and rehabilitation with the same effects as a clearcut that are adjacent to a WLPZ, a special operating zone shall retain understory and mid-canopy conifers and hardwoods. These trees shall be protected during falling, yarding and site preparation to the extent feasible. If trees that are retained within this zone are knocked down during operations, that portion of the trees that is greater than 6" in diameter shall remain within the zone as Large Woody Debris. The zone shall be 25 feet above Class I WLPZs with slopes 0-30% and 50 feet above Class I WLPZs with slopes > 30%.~~

(d) Measures to Offset Adverse Watershed Effects -

(1) The plan shall fully describe: (A) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and (B) the person(s) responsible for the implementation of each measure, if other than the timber operator.

(2) In proposing, reviewing, and approving such measures, preference shall be given to the following: (A) measures that are both onsite (i.e., on or near the plan area) and in-kind (i.e., erosion control measures where sediment is the problem), and (B) sites that are located to maximize the benefits to the impacted portion of a watercourse or lake. Out-of-kind measures (i.e., improving shade where sediment is the problem) shall not be approved as meeting the requirements of this subsection.

(e) Channel zone requirements -

(1) There shall be no timber operations within the channel zone with the following exceptions:

(A) ~~timber harvesting that is~~ Actions directed to improve salmonid habitat ~~through the limited use of the selection or commercial thinning silvicultural methods~~ with review and concurrance~~comment~~ by DFG.

(B) ~~timber harvesting~~ Actions necessary for the construction, ~~or~~ reconstruction, removal, or abandonment of approved watercourse crossings.

(C) ~~timber harvesting~~ Actions necessary for the protection of public health, ~~and~~ safety and general welfare. This includes actions necessary to protect infrastructure facilities including, but not limited to, roads, bridges, powerlines, utilities, ~~or~~ water drafting

structures, homes, and other legally permitted structures.

(D) Actions to allow for full suspension cable yarding when necessary to transport logs through the channel zone.

(E) Timber harvesting in Class III watercourses ~~where exclusion of timber operations is not for protection of listed salmonids.~~consistent with 14 CCR § 916.9 [936.9,956.9] subsection (h)(7).

(F) Actions reviewed by the RWQCB which seek to correct or remediate adverse impacts to the beneficial uses of water.

(2) In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF~~, or a supervised designee,~~ that prepared the plan, or a supervised designee, prior to the preharvest inspection.

(f) Class I watercourses -

(1) For Class I watercourses, ~~based on biological characteristics~~ where fish are always or seasonally present or where fish habitat is restorable, any plan involving timber operations within the WLPZ shall contain the following information:

(A) Clear and enforceable specifications of timber operations within the Class I WLPZ, including a description of how any disturbance, or log or tree cutting and removal shall be carried out to conform with 14 CCR §§ 916.2 [936.2, 956.2], subsection (a) and 916.9 [936.9, 956.9], subsection (a).

(B) A description of all existing permanent logging road watercourse crossings.

(C) Clear and enforceable specifications describing how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages.

(D) Clear and enforceable specifications for construction and operation of any

new crossing(s) of a Class I watercourse to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage, or other potential impairment of beneficial uses of water.

(E) Documentation of how proposed harvesting in the WLPZ contributes to the objectives of each zone stated in 14 CCR § 916.9 [936.9,956.9], subsection (c) and other goals in 14 CCR § 916.9 [936.9,956.9], subsection (a) (1)-(8). Documentation shall include the examinations, analysis, and other requirements listed in 14 CCR § 916.4 [936.4, 956.4], subsection (a).

(2) Class I watercourses with confined channels in watersheds in the coastal andromy zone~~coho salmon ESU~~: The following are the minimum requirements for WLPZ delineation and timber operations in Class I WLPZs in watersheds in the coastal andromy zone~~coho salmon ESU~~ where confined channels are present. WLPZ width ranges from 100-150 feet slope distance, depending on the silvicultural system applied above the WLPZ. Three Zones are established within the WLPZs: The Core Zone is nearest to the water, the Inner Zone is the middle zone contiguous to the Core Zone, and the Outer Zone is furthest from the water and contiguous to the Inner Zone. Graphic depictions of zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 4. Table 1 specifies the enforceable standards to be used for protection of Class I watercourses for the area included in the coastal anadromy zone:

(A) Core Zone: The minimum width of the Core Zone shall be 30 feet measured from the watercourse transition line or lake transition line. No timber operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1) (A)-(F), or those approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9], subsections (s), (t), and (u).

(B) Inner Zone: The minimum width of the Inner zone shall be 70 feet measured from the landward edge of Core Zone. Timber operations are permitted in this zone when conducted to meet the goals of this section, objectives for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. When commercial thinning is used, t~~T~~he QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

2. Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9,956.9], subsections (s), (t), and (u).

3. Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 70% overstory canopy cover in the Northern Forest District of the coastal anadromy zone. The postharvest canopy may be composed of both conifers and hardwood species ~~(preferential to salmonid species such as alder)~~ and shall have at least 25% overstory conifer canopy.

[OPTION 100 replaces 3. above: 3. Postharvest stand shall have a minimum 75% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 65% overstory canopy cover in the Northern Forest District of the coastal anadromy zone. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.]

~~***[OPTIONAL AMENDMENT 4 (replaces subsection 3. above)** Postharvest stand shall have a minimum 60% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood***

~~;species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]~~

~~***[OPTIONAL AMENDMENT 5 (replaces subsection 3. above)** Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast Forest Practice District of the~~ coho salmon ESU ~~and a minimum 60% overstory canopy cover in the Northern Forest Practice District of the coho salmon ESU. The postharvest canopy may be composed of both conifers and hardwood species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]~~

4. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones. ~~***[OPTIONAL AMENDMENT 6 (adds language)** The RPF may propose to substitute smaller diameter trees when consistent with 14 CCR § 916.9 [936.9, 956.9], subsection (f)(2)(B)(5.). The RPF must explain and justify in the PLAN why the proposed substitution is more conducive to current and long-term large woody debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.]~~

5. Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (f)(2)(B)(1.)~~(4)~~(3.) above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (~~i.e.~~ e.g., trees ~~with significant~~ that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an

unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

~~***6. [OPTIONAL AMENDMENT 7 (adds language)** Angular Canopy Density shall not be reduced below 80% in the post-harvest stand.]***~~

~~***7.[OPTIONAL AMENDMENT 8 (adds language)** Postharvest basal area stocking shall have 250 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by coastal redwood, 200 square feet or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by Douglas-fir forest type, and 180 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by mixed conifer or any other conifer forest types not mentioned in this subsection. Postharvest basal area stocking levels shall have at least 25% overstory conifer canopy, when existing in the preharvest stand. In lieu practices, alternate prescriptions or site specific plans developed pursuant 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be proposed for postharvest basal area stocking lower than the values above. These proposals shall include a collection of relevant stand data and growth modeling to show how the proposal will shorten the time required to provide an increasing number of large trees that contributes to properly functioning salmonid habitat. Guidance for procedures can be found in Flood Prone Area Considerations in the Coast Redwood Zone (Riparian Protection Committee Report, Cafferata et al 2005).]***~~

(C) Outer Zone: The minimum width of the Outer Zone shall be 50 feet measured from the landward edge of Inner Zone. This zone is required where evenaged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions declared under 14 CCR § 913.6 [933.6. 953.6], subsection (b)(3) as most related to any evenaged silvicutural system, variable retention or rehabilitation of understocked areas will be utilized contiguous to the watercourse and lake protection zone. Timber operations areharvesting is permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3), (5) and (6), pursuant to 14 CCR § 916.9 [936.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

2. Priority shall be given to retain wind firm trees.

[OPTIONAL AMENDMENT 9 (replaces subsection (C) above) Outer Zone: The minimum width of the Outer Zone shall be 50 feet measured from the landward edge of Inner Zone. This zone is required where (i) significant windthrow is a demonstrated common occurrence,(ii) there is a need to provide additional wood recruitment to the watercourse, or (iii) where tractor logging is proposed on slopes greater than 50% in areas contiguous to watercourse and lake protection zone. Timber operations areharvesting is permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3),(5), (6), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to

meet the following requirements:

1. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

2. Priority shall be given to retain wind firm trees.**]**

(D) Preferred~~Best~~ Management Practices in the Inner and Outer Zones: When timber operations are considered pursuant to 14 CCR §§ 916.3 [936.3, 956.3], subsection (c) and 916.4 [936.4, 956.4], subsection (d), the following Preferred~~Best~~ Management Practices should be considered for inclusion in the Plan by the RPF and by the Director:

1. Preflagging or marking of any skid trails before the preharvest inspection;

2. Heavy equipment should be limited to slopes less than 35% with low or moderate EHRs;

3. Use feller bunchers or hydraulic heel boom loaders which do not drag/skid logs through the zone;

4. Minimize turning of heavy equipment which would result in increased depth of ground surface depressions; and

5. Use mechanized harvesting equipment which delimb harvested trees on pathway over which heavy equipment would travel.

(E) Additional Special Operating Zone: For situations contiguous to the Outer Zone where evenaged regeneration methods, seed tree removal step, shelterwood removal step, alternative prescriptions declared under 14 CCR § 913.6 [933.6, 953.6], subsection (b)(3) as most related to any evenaged silvicutural system**,** variable retention or rehabilitation of understocked areas with the same effect as a clearcut is used, slopes are greater than 50%,

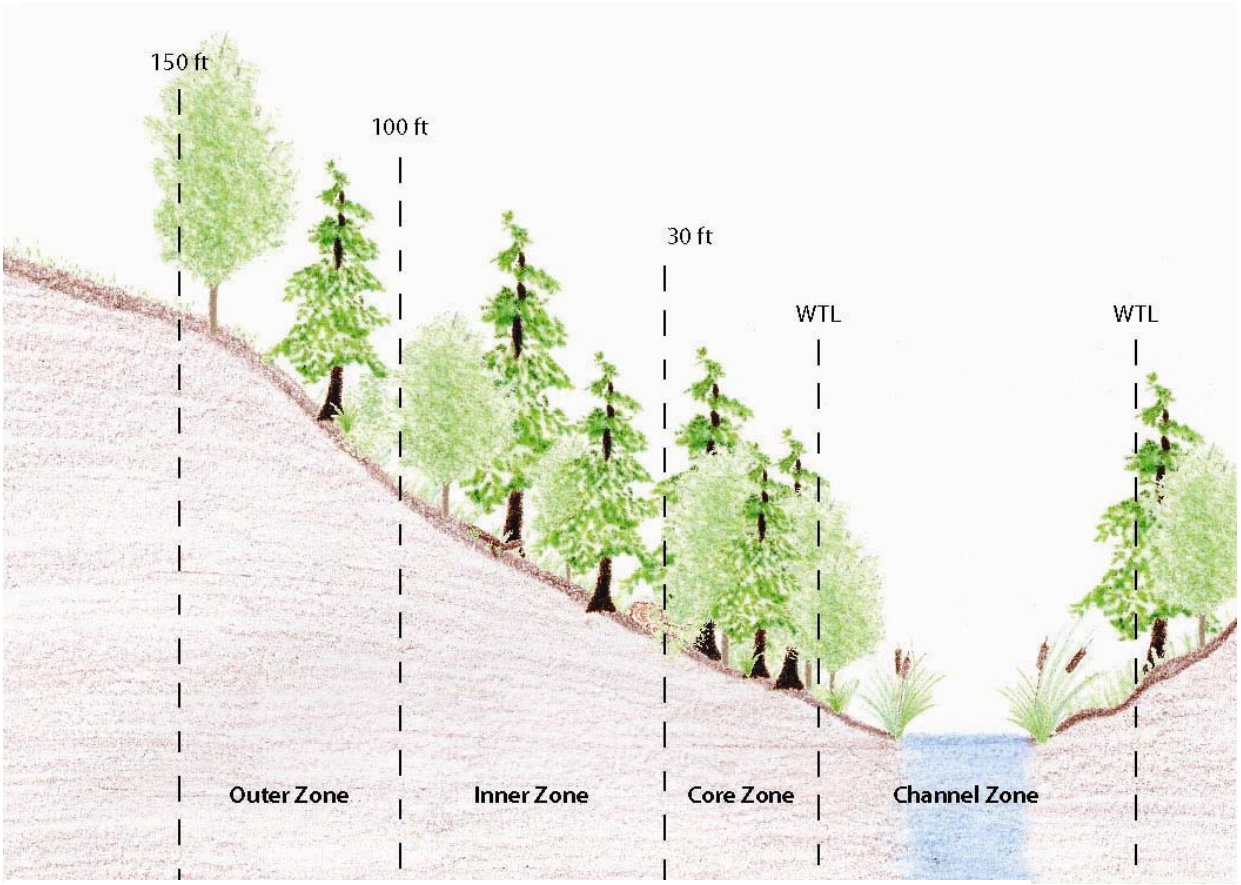
and the Outer Zone is located on any north aspect, the RPF shall consider the need for a special operating zone for purposes of shading the watercourse from direct low angle solar radiation from beneath the overstory canopy ~~additional shading from solar radiation from beneath the overstory canopy~~ that is expected to have a potential significant adverse impact on water temperature. When ~~there is a determination for the need of~~ the special operating zone is needed,the special operating zone shall retain understory ~~or~~and mid-canopy conifers and hardwoods. These trees shall be protected during falling, yarding and site preparation to the extent feasible. Width of the zone shall be 50 feet measured from the landward edge of the Outer Zone.

Table 1: Procedure for Determining WLPZ Widths and Protective Measures Class I WLPZs - Confined Channels - Coastal Anadromy Zone

Pursuant to 14 CCR 916.9[936.9,956.9](F)(2)

Zone Designation	Zone width (ft.)	Overstory Canopy Cover		Large Tree Retention	Silviculture Requirements	Operational Requirements
Channel Zone	Variable	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)		Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v); no sanitation salvage except 916.9 (s)(t)and (u)	No timber operations except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v);
Core Zone per 916.9 [936.9 956.9] (f)(2)(A)	30 ft.	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)		Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v); no sanitation salvage except 916.9 (s)(t)and (u).	No timber operations except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v);
Inner Zone per 916.9 [936.9 956.9] (f)(2)(B)	70 ft.	80% Coast and Southern Forest District of Coastal Anadromy Zone per 916.9 [936.9 956.9] (f)(2)(B)3.	70% in Northern Forest District of Coastal Anadromy Zone per 916.9 [936.9 956.9] (f)(2)(B)3.	13 largest trees /ac. per 916.9 [936.9 956.9] (f)(2)(B)4.	Increase QMD; No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(2)(D)
Outer Zone per 916.9 [936.9 956.9] (f)(2)(C) Outer Zone applicable only where even-aged regeneration used adjacent to the WLPZ	50 ft.	50% per 916.9 [936.9 956.9] (f)(2)(C).		NA	Commercial thinning or single tree selection only; Retain wind firm trees.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(2)(D)
Special Operating Zone per 916.9 [936.9 956.9] (f)(2)(E) SOZ applicable only where even-aged regeneration used adjacent to the WLPZ	50 ft.	NA		NA	Retain understory and midstory trees per 916.9 [936.9, 956.9] (f)(2)(E)	All other Forest Practice Rules

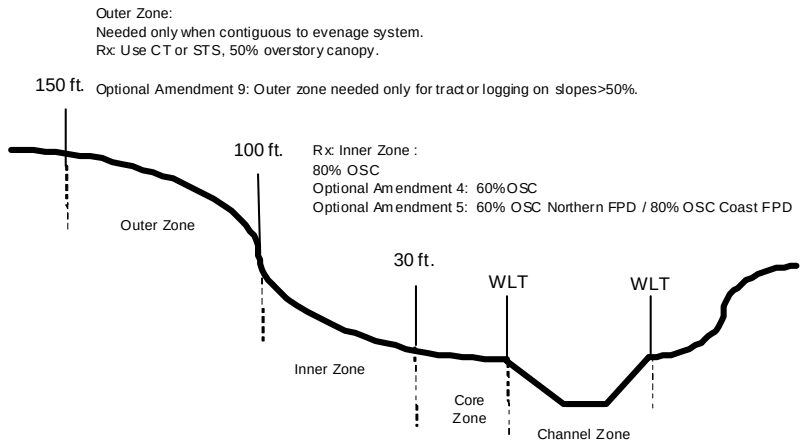
Figure 4: Graphic of profile view of Class I WLPZ with confined channels in watersheds in the coastal anadromy zone (not to scale)



Outer Zone:
50 ft. Outer Zone required only when even aged silv. system contiguous to WLPZ
Modified commercial thinning or single tree selection
50% overstory canopy (OSC)

Inner Zone:
Modified commercial thinning or single tree selection
Increase QMD
No Sanitation Salvage
Retain 80% OSC in the Coast and Southern Forest Districts of the coastal anadromy zone and 70% OSC in the Northern Forest District of the coastal anadromy zone
Retain 13 largest trees/ac.

~~**Figure 4: Graphic of profile view of Class I WLPZ with confined channels in watersheds in the coho salmon ESU (not to scale)**~~ **Note: Delete graphic below**



(3) Class I watercourses with flood prone areas or channel migration zones: The following are the minimum requirements for WLPZ delineation and timber operations in Class I WLPZs in locations where flood prone areas and/or CMZs are present (where the width of the valley floor is often 2-4 times channel zone width or more). WLPZ widths vary depending on the extent of the flood prone area and silvicultural system applied contiguous to the WLPZ.

There are up to five zones established within the WLPZ: The CMZ (when present), the Core Zone is the portion of the flood prone area nearest the water (and contiguous to the CMZ when present), the Inner Zone A is contiguous to the Core Zone , the Inner Zone B is contiguous to Inner Zone A and extends to the landward edge of the flood prone area, and the Outer Zone is hillslope area and is contiguous to the Inner Zone B and landward perimeter of the flood prone area. Table 2 specifies the enforceable standards to be used for protection of Class I watercourses with flood prone area or channel migration zones.

The zones and the abbreviated descriptions of the silvicultural prescriptions, and operational requirements are shown in Figure 5.

(A) Channel Migration Zone: When a CMZ is present, no timber operations are permitted in this zone except for those listed in § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (v).

(B) Core Zone: The minimum width of the Core Zone shall be 30 feet measured from the watercourse transition line or lake transition line. No timber operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1) (A)-(F), or those approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

(C) Inner Zone A: The Inner Zone A generally encompasses the portion of the flood prone area from 30 feet beyond the WTL (Core Zone perimeter) up to 150 feet from the WTL. The minimum width of the Inner Zone A shall be the greater of the area from the landward edge of Core Zone to the landward edge of the Inner Zone B or 70 feet. The maximum width is 120 feet. Timber operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9], subsection (c)(2), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e) (1) (A)-(F) or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. When commercial thinning is used, t~~T~~he QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

2. Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

3. Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 70% overstory canopy cover in all other watersheds with listed anadromous salmonids. The postharvest canopy may be composed of both conifers and hardwood species ~~(preferential to salmonid species such as alder)~~ and shall have at least 25% overstory conifer canopy.

~~***[OPTIONAL AMENDMENT 4 (replaces subsection 3. above)*** *Postharvest stand shall have a minimum 60% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]*~~

~~***[OPTIONAL AMENDMENT 5 (replaces subsection 3. above)*** *Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast Forest Practice District of the*~~ coho salmon ESU ~~*and a minimum 60% overstory canopy cover in the Northern Forest Practice District of the*~~ coho salmon ESU. ~~*The postharvest canopy may be composed of both conifers and hardwood species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]***~~

4. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones. ~~***[OPTIONAL AMENDMENT 6 (adds language)*** *The RPF may propose to substitute smaller diameter trees when consistent with 14 CCR § 916.9 [936.9, 956.9], subsection (f) (3)(B)(5.). The RPF must explain and justify in the PLAN why the proposed substitution is more conducive to current and long term large woody debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.]***~~

5. Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (f)(3)(C)(1.)~~-(4)~~(3.) above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (~~i.e.~~ e.g., trees ~~with significant~~ that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

~~***6. [OPTIONAL AMENDMENT 7 (adds language)** Angular Canopy Density shall not be reduced below 80% in the post harvest stand.]***~~

~~***7.[OPTIONAL AMENDMENT 8 (adds language)** Postharvest basal area stocking shall have 250 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by coastal redwood, 200 square feet or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by Douglas-fir forest type, and 180 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by mixed conifer or any other conifer forest types not mentioned in this subsection. Postharvest basal area stocking levels shall have at least 25% overstory conifer canopy, when existing in the preharvest stand. In lieu practices, alternate prescriptions or site specific plans developed pursuant 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be proposed for postharvest basal area stocking lower than the values above. These proposals shall include a collection of relevant stand data and growth***~~

~~*modeling to show how the proposal will shorten the time required to provide an increasing number of large trees that contributes to properly functioning salmonid habitat. Guidance for procedures can be found in Flood Prone Area Considerations in the Coast Redwood Zone (Riparian Protection Committee Report, Cafferata et al 2005).]*~~

(D) Inner Zone B: The Inner Zone B is ~~typically~~ applicable when there are very wide flood prone areas. The Inner Zone B encompasses the portion of the flood prone area from the landward edge of the Inner Zone A (i.e.150 feet from the WTL) to the landward edge of the flood prone area. The landward edge of the Inner Zone B (i.e. the landward perimeter of the flood prone area) shall be established in accordance with flood prone area definitions in 14 CCR § 895.1. Timber operations are~~is~~ permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), 14 CCR § 916.9 [936.9,956.9], subsection (e) (A)-(F), or pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the Core and Inner Zones.

2. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species ~~(preferential to salmonid species such as alder)~~ and shall have at least 25% overstory conifer canopy.

(E) Preferred~~Best~~ Management Practices in the Inner Zone A and B of flood prone areas. When timber operations are considered pursuant to 14 CCR § 916.3 [936.3, 956.3], subsection (c) and 916.4 [936.4, 956.4], subsection (d), the following Preferred~~Best~~ Management Practices should be considered for inclusion in the Plan by the RPF and by the Director when timber operations are conducted in the Inner Zones of the flood prone area.

1. Implement actions to improved salmonid habitat conditions: Implement maintenance and repair actions that contribute to improving undesired existing conditions and contribute to restoring properly functioning salmonid habitat.

2. Minimize Yarding and Skidding: Skid trails, yarding corridors, falling activities, and log yarding, should not alter the natural drainage or flow patterns. EEZ =of 30 feet should be applied near side channels and areas of ponding. Very limited, pre-flagged, pre-approved prior to falling skid trails shall be used and abandoned so as to minimize risk of becoming new secondary channels by flood flows. Minimize or exclude, to the extent feasible, tractor skidding/crossings over, through, or along secondary channels (protection of overflow channels is a key element). Locate tractor roads on high ground areas to the greatest extent possible. When feasible, use feller bunchers which do not drag/skid logs through the zone, minimize turning of equipment which would result in increased depth of ground surface depressions, and utilize mechanized harvesting equipment which delimbs harvested trees on the pathway over which equipment would travel. Cable yarding corridors should be located at wide intervals consistent with practices that use lateral yarding. Full suspension should be used when possible.

3. Minimize Soil Erosion and Prevent Discharge: Design timber operations to avoid turbid runoff by treating any ground disturbance greater than 100 square feet. Operations shall be conducted only in dry soil conditions. Avoid disturbance of vegetation not intended for harvest that could increase the likelihood of erosion or damages the reinforcing root network on the channel banks, including any secondary overflow channel. . Restore any tracks or trails to an original surface.

4. Avoid Road and Landing Use: All new roads and landings shall be located outside of zone. When feasible, minimize use of existing roads and landings in the flood prone area. No servicing of equipment within the flood prone area. Exceptions include the use

of road and landings to accomplish actions to improved salmonid habitat conditions stated 14 CCR 916.9 [936.9, 956.9], subsection (f)(3)(E)(1.) above.

5. Avoid Slash concentration and Site Preparation: Logging slash shall not be disposed of or concentrated in side channels. When slash is treated within the flood prone areas, scatter slash and avoid piling or other concentrations that may obstruct flows in side channels. When feasible, concentrate/mulch slash in tractor roads. No mechanical site preparation, broadcast burning or pile burning.

6. Delineate Zone on the Ground: Locations of all WLPZ zones and CMZs shall be designated on the ground.

7. Avoid Use of Water Drafting Sites: Water drafting sites shall be located outside flood prone areas when feasible (exceptions could include, but are not limited to, drafting from an existing watercourse crossing that is appropriately engineered to facilitate properly functioning salmonid habitat and those sites designed and permitted pursuant to a waste discharge or steam alteration permits.

8. Avoid Disturbance to Critical Flood Prone Area Habitat: Avoid disturbance of abandoned meanders, oxbox lakes, or other features that provide off-channel habitat for fish during flood flows. Avoid activities that could increase potential for diversion or avulsion of stream flow out of existing channel, including breaching or lowering the elevation of natural levees. Retain adequate hydraulic roughness provided by trees on the floodplain surface, thereby slowing flood water velocity on floodplains, attenuating peak flood flows, and allowing sediment to be deposited. Retain existing deciduous hardwoods preferential to anadromous salmonid species and down large woody debris.

(F) Outer Zone: The width of the Outer Zone is 50 feet measured from the landward edge of Inner Zone. This zone is required where evenaged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions declared under 14 CCR §

913.6 [933.6], subsection (b)(3) as most related to any evenaged silvicutural system, variable retention or rehabilitation of understocked areas will be utilized contiguous to the watercourse and lake protection zone. Timber operations are permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3), (5) and (6), pursuant to 14 CCR § 916.9 [936.9] subsection (e)(1) (A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

2. Priority shall be given to retain wind firm trees.

[OPTIONAL AMENDMENT 9 (replaces subsection (F) above) Outer Zone: The minimum width of the Outer Zone shall be 50 feet measured from the landward edge of Inner Zone. This zone is required where (i) significant windthrow is a demonstrated common occurrence,(ii) there is a need to provide additional wood recruitment to the watercourse, or (iii) ~~where~~ tractor logging is proposed on slopes greater than 50% in areas contiguous to watercourse and lake protection zone. Timber operations are~~harvesting is~~ permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3),(5), (6), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall

have at least 25% overstory conifer canopy.

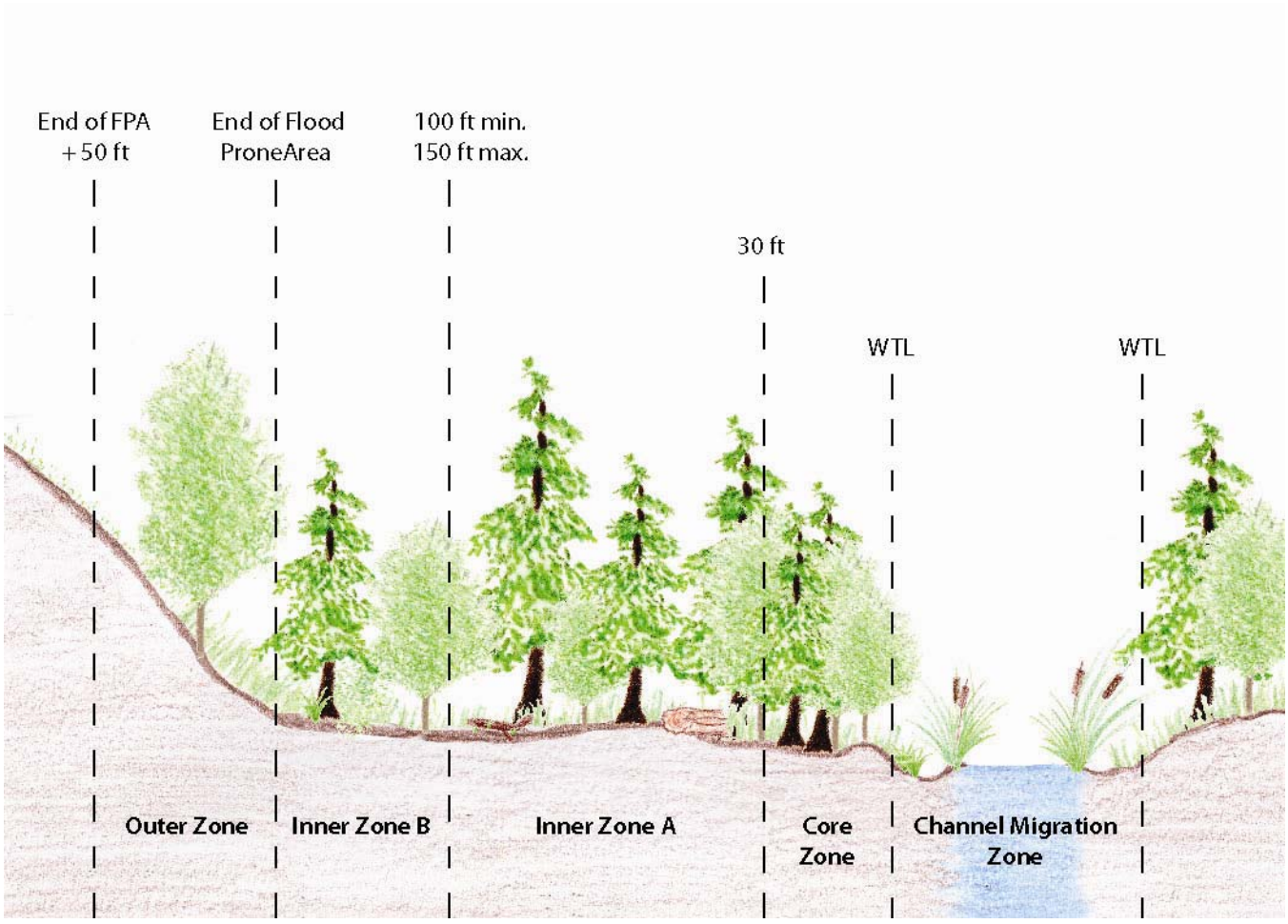
2. Priority shall be given to retain wind firm trees.**]**

Table 2: Procedure for Determining WLPZ Widths and Protective Measures Class I WLPZs – with flood prone areas or channel migration zones

Pursuant to 14 CCR 916.9 [936.9, 956.9] (f)(3)

Zone Designation	Zone width (ft.)	Overstory Canopy Cover		Large Tree Retention	Silviculture Requirements	Operational Requirements
Channel Zone or Channel Zone per 916.9 [936.9 956.9] (f)(3)(A)	Variable	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)		Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v); no sanitation salvage except 916.9 (s)(t)and (u)	No timber operations except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v);
Core Zone per 916.9 [936.9 956.9] (f)(3)(B)	30 ft.	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)		Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v); no sanitation salvage except 916.9 (s)(t)and (u).	No timber operations except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v);
Inner Zone A per 916.9 [936.9 956.9] (f)(3)(C)	Minimum 70 ft. Maximum 120 ft.	80% Coast and Southern Forest District of Coastal Anadromy Zone per 916.9 [936.9 956.9] (f)(3)(B)3.	70% in Northern Forest District of Coastal Anadromy Zone per 916.9 [936.9 956.9] (f)(3)(B)3.	13 largest trees /ac. per 916.9 [936.9 956.9] (f)(3)(B)4.	Increase QMD; No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(3)(E)
Inner Zone B per 916.9 [936.9 956.9] (f)(3)(D)	Variable: distance from Inner Zone A to end of FPA.	50%		13 largest trees /ac. per 916.9 [936.9 956.9] (f)(3)(B)4.	Increase QMD; No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(3)(E)
Outer Zone per 916.9 [936.9 956.9] (f)(3)(F) Applicable only where even-aged regeneration used adjacent to the WLPz	50 ft.	50%		NA	Commercial thinning or single tree selection only; Retain wind firm trees.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(3)(E)

Figure 5: Graphic of Profile View of Class I WLPZ in flood prone areas and channel migration zones (not to scale)

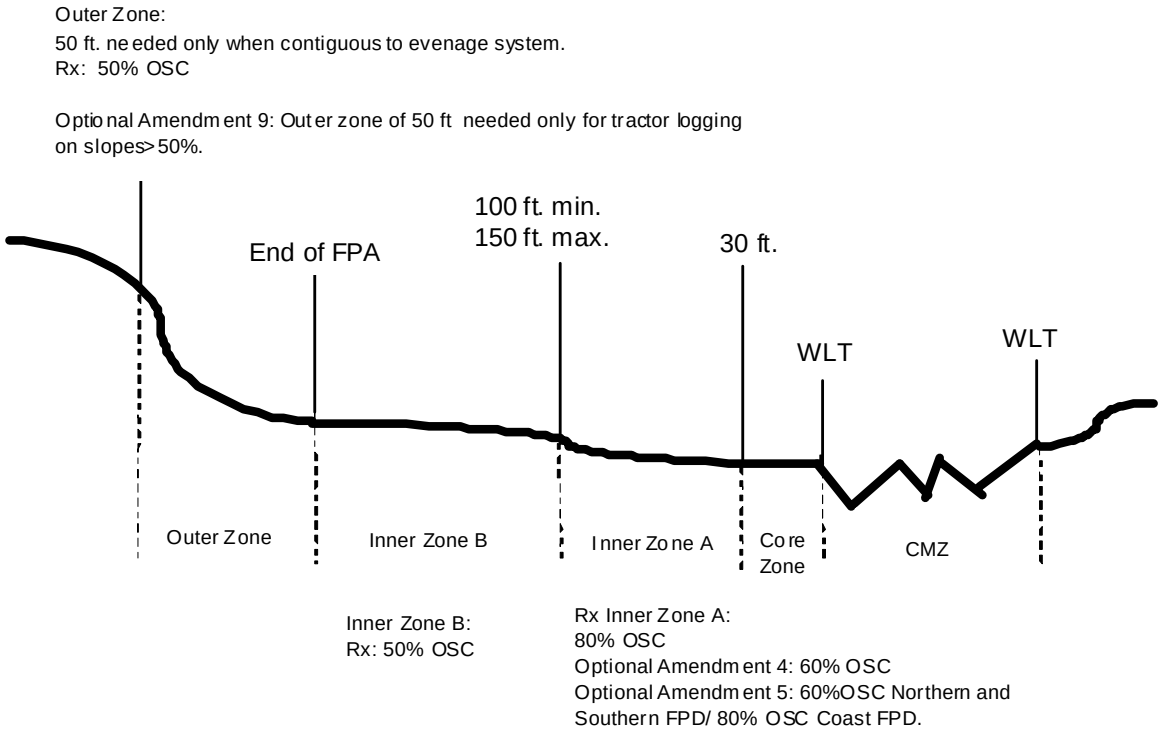


Outer Zone:
50 ft. Outer Zone required only when even aged silv. system contiguous to WLPZ
Modified commercial thinning or single tree selection
50% overstory canopy (OSC)

Inner Zone B:
Modified commercial thinning or single tree selection
50% overstory canopy (OSC)
Retain 13 largest trees/ac.

Inner Zone A:
Modified commercial thinning or single tree selection
Increase QMD
No Sanitation Salvage
Retain 80% OSC in the Coast and Southern Forest Districts of the coastal anadromy zone and 70% OSC in the Northern Forest District of the coastal anadromy zone
Retain 13 largest trees/ac.

~~**Figure 5 : Graphic in Profile View of Class I WLPZ in flood prone areas and channel migration zones (not to scale)**~~ **Note: Delete graphic below**



(4) Site-Specific Plans for watercourses with flood-prone areas or channel migration zones: This section is an optional approach to be used at the discretion of the plan submitter. When used, this section replaces requirements found in 14 § 916.6 [936.9, 956.9], subsection (f)(3). The goal of this approach is to allow RPFs to develop a site specific plan for salmonid habitat protection on a flood-prone area. Site specific plans are to lead to development of properly functioning salmonid habitat and can include active management to restore the beneficial uses of the riparian zone.

(A) Timber operations are limited to the flood-prone areas beyond the outer margin of a CMZ.

(B) RPFs are to propose riparian protection zones and management practices that are designed for local conditions.

(C) Site specific assessments shall include:

1. Identifying the issues that need to be considered for watercourse and riparian protections [refer to Table 1 of "*Flood Prone Area Considerations in the Coast Redwood Zone* "(Riparian Protection Committee Report, Cafferata et al 2005)

2. Describing processes that need to be considered for the issues identified above.

3. Developing a method to define a desired trajectory for watercourse and riparian conditions in the context of known limiting factors for salmonids in the watershed.

4. Defining how the proposed operations will aid reaching the desired trajectories.

5. Disclosing assumptions being made at each step and limits to both the science and the proposed management activities.

6. Identifying how to determine what needs to be monitored and how to conduct the monitoring.

~~7. Supporting documentation is required including but not limited to: field data, NetMap analysis, large wood modeling results, etc.~~

~~(D) As described in the "*Flood Prone Area Considerations in the Coast Redwood Zone*" (Cafferata et al 2005), the site-specific plan for Class I flood prone area management shall include:~~

~~1. an inventory of the flood prone area for all hydrologic, geomorphic, and biological functions present that can be affected by timber operations;~~

~~2. a determination of the category of inundation where management is proposed [i.e., very frequent (1-5 yr recurrence interval or RI), frequent (5-20 yr RI), moderately frequent (20-50 yr RI), or infrequent (50+ yr RI)]; and~~

~~3. an appropriate analysis for functions present in light of possible significant adverse impacts from management. Analysis for hydrologic functions may include how the flood prone area vegetative roughness will change with timber operations. Analyses for geomorphic functions may include how proposed operations will change bank stabilization, amount of soil disturbance on the flood prone area, and the potential for channel avulsion. Analyses for biological functions may include how harvesting will affect overflow channels, large wood recruitment, stream shading, riparian microclimate, organic matter input, and terrestrial wildlife habitat.~~

~~(E) Disclosure and analysis requirements increase with increased risk associated with the proposed level of activity and the increased frequency of inundation in the flood prone area. In particular, management proposed within the 20 year recurrence interval flood prone area in a watershed with coho salmon habitat or restorable habitat requires detailed analysis.~~

~~(F) In addition to considering how proposed prescriptions will affect flood prone area functions at the project level, site specific plans must consider a larger watershed~~

~~perspective that includes consideration of the stream network and past activities in the watershed. Also, consideration must be given to the current condition of the flood-prone area.~~

~~**(G)** Information provided in the "*Flood Prone Area Considerations in the Coast Redwood Zone* " (Cafferata et al 2005) is to be used for guidance in the coast redwood zone.~~

~~**(H)** The site-specific plan for Class I riparian management must: (1) have Review Team agencies pre-consultation and receive concurrence from the Review Team agencies, including DFG, and (2) include a monitoring component.~~

~~(4)~~(5) Class I watercourses with confined channels outside watersheds in the coastal andromy zone~~coho salmon ESU~~: The following are the minimum requirements for WLPZ delineation and timber operations in Class I WLPZs in locations outside of watersheds in the coastal andromy zone~~coho salmon ESU~~ where confined channels are present. WLPZ width is 100 feet slope distance, with an additional 25 foot ELZ depending on the silvicultural system applied contiguous to the WLPZ. Three zones are established within the WLPZs: The Core Zone is nearest to the water, the Inner Zone is the middle zone contiguous to the Core Zone, and the Outer Zone is furthest from the water and contiguous to the Inner Zone. Graphic depiction of zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 6. Table 3 specifies the enforceable standards to be used for protection of Class I watercourses for the area outside the coastal anadromy zone:

(A) Core Zone: The minimum width of the Core Zone shall be 30 feet measured from the watercourse transition line or lake transition line. No timber operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e) (1)(A)-(F), or those approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

(B) Inner Zone: The minimum width of the Inner Zone shall be 40 feet measured from the landward edge of Core Zone. Timber operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e)(1) (A)-(F) or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. When commercial thinning is used, t~~T~~he QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

2. Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9,956.9], subsections (s), (t), and (u).

3. Postharvest stand shall have a minimum 70% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species ~~(preferential to salmonid species such as alder)~~ and shall have at least 25% overstory conifer canopy. ~~***[OPTIONAL AMENDMENT 4 (replaces subsection 3. above)*** *Postharvest stand shall have a minimum 60% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species (preferential to salmonid species such as alder) and shall have at least 25%* overstory conifer canopy.***]***~~

4. Postharvest stand shall retain the 7 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones. ~~***[OPTIONAL AMENDMENT 6 (adds language)*** *The RPF may propose to substitute smaller diameter trees when consistent with 14 CCR § 916.9 [936.9, 956.9], subsection (f)(2)(B)(5.). The RPF must explain and justify in the plan*~~

~~*why the proposed substitution is more conducive to current and long-term large woody debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.]*~~

5. Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (f)(5)(B)1-~~(4)~~3 above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (~~i.e.~~ e.g., trees ~~with significant~~ that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

~~***6. [OPTIONAL AMENDMENT 7 (adds language)*** Angular Canopy Density shall not be reduced below 80% in the post-harvest stand.]~~

~~***7.[OPTIONAL AMENDMENT 8 (adds language)*** *Postharvest basal area stocking shall have 250 square foot/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by coastal redwood, 200 square feet or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by Douglas-fir forest type, and 180 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by mixed conifer or any other conifer forest types not mentioned in this subsection. Postharvest basal area stocking levels shall have at least 25% overstory conifer canopy, when existing in the preharvest stand. In lieu practices, alternate prescriptions or site specific plans developed pursuant 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be proposed for*~~

~~*postharvest basal area stocking lower than the values above. These proposals shall include a collection of relevant stand data and growth modeling to show how the proposal will shorten the time required to provide an increasing number of large trees that contributes to properly functioning salmonid habitat. Guidance for procedures can be found in Flood Prone Area Considerations in the Coast Redwood Zone (Riparian Protection Committee Report, Cafferata et al 2005).]*~~

(C) Outer Zone: The minimum width of the Outer Zone shall be 30 feet measured from the landward edge of Inner Zone. When evenaged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions declared under 14 CCR § 913.6 [933.6, 953.6], subsection (b)(3) as most related to any evenaged silvicutural system**,** variable retention, or rehabilitation will be utilized contiguous to watercourse and lake protection zones, an additional 25 foot ELZ is required contiguous to the Outer Zone.

Timber operations are permitted in the Outer Zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3),(5) and (6), pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (e)(1) (A)-(F), or pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

2. Priority shall be given to retain wind firm trees.

[OPTIONAL AMENDMENT 101 (replaces subsection (C) above) (C) Outer Zone: The minimum width of the Outer Zone shall be 30 feet measured from the landward edge of Inner

Zone. This zone is required where (i) significant windthrow is a demonstrated common occurrence,(ii) there is a need to provide additional wood recruitment to the watercourse, or (iii) tractor logging is proposed on slopes greater than 50% in areas contiguous to watercourse and lake protection zone. Timber operations are permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3),(5), (6), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

1.Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

2. Priority shall be given to retain wind firm trees.**]**

(D) Preferred~~Best~~ Management Practices in the Inner and Outer Zone: When timber operations are considered pursuant to 14 CCR §§ 916.3 [936.3, 956.3], subsection (c) and 916.4 [936.4, 956.4], subsection (d), the following Preferred~~Best~~ Management Practices should be considered for inclusion in the Plan by the RPF and by the Director:

1. Preflagging or marking of any skid trails before the preharvest inspection;

2. Heavy equipment should be limited to slopes less than 35% with low or moderate EHRs;

3. Use feller bunchers or hydraulic heel boom loaders which do not drag/skid logs through the zone;

4. Minimize turning of heavy equipment which would result in increased depth of ground surface depressions; and

5. Use mechanized harvesting equipment which delimb harvested trees on pathway over which heavy equipment would travel.

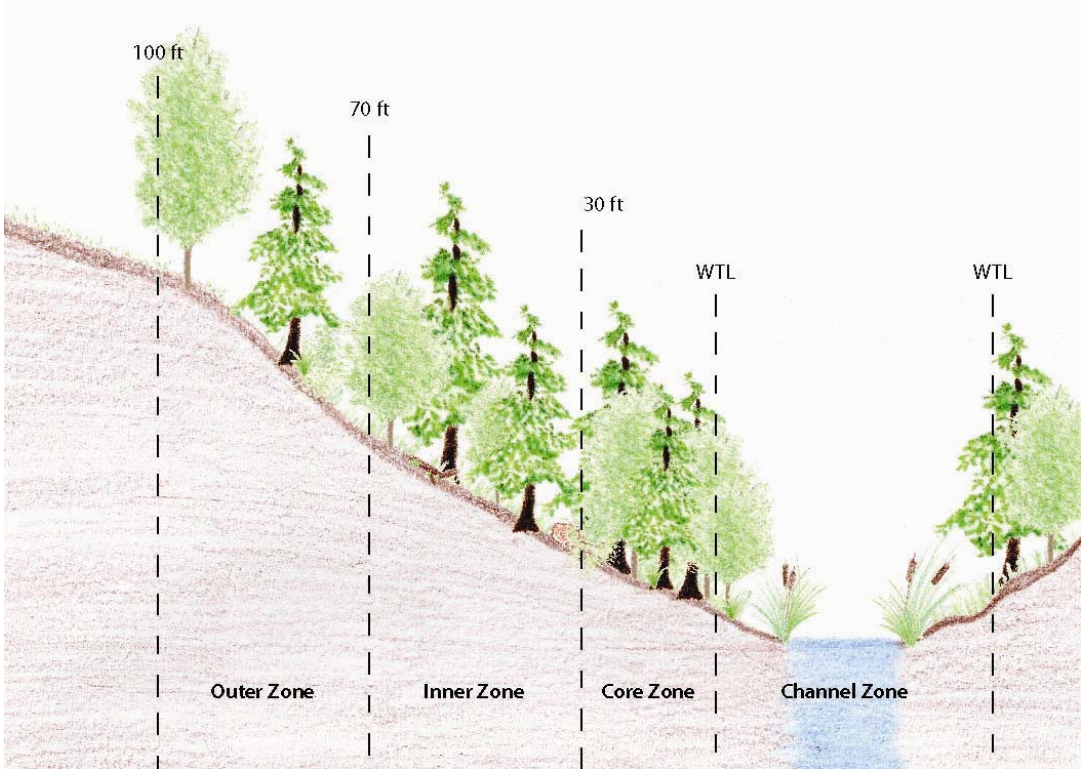
~~**(E) Additional Special Operating Zone:** For situations contiguous to the Outer Zone where evenaged regeneration methods, seed tree removal step, shelterwood removal step, alternative prescriptions declared under 14 CCR § 913.6 [933.6, 953.6], subsection (b)(3) as most related to any evenaged silvicutural system, variable retention or rehabilitation of understocked areas with the same effect as a clearcut is used, slopes are greater than 50%, and the Outer Zone is located on any north aspect, the RPF shall consider the need for additional shading from solar radiation from beneath the overstory canopy that is expected to have a potential significant adverse impact on water temperature. When there is a determination for the need of the special operating zone, the special operating zone shall retain understory or mid-canopy conifers and hardwoods. These trees shall be protected during falling, yarding and site preparation to the extent feasible.~~

Table 3: Procedure for Determining WLPZ Widths and Protective Measures Class I WLPZs - Confined Channels - Outside the Coastal Anadromy Zone

Pursuant to 14 CCR 916.9[936.9,956.9](F)(4)

Zone Designation	Zone width (ft.)	Overstory Canopy Cover	Large Tree Retention	Silviculture Requirements	Operational Requirements
Channel Zone	Variable	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v); no sanitation salvage except 916.9 (s)(t)and (u)	No timber operations except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v);
Core Zone per 916.9 [936.9 956.9] (f)(4)(A)	30 ft.	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9](e) A-F or 916.9 [936.9 956.9] (v)	Retain all trees except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v); no sanitation salvage except 916.9 (s)(t)and (u).	No timber operations except per 916.9 [936.9, 956.9] (e) A-F or 916.9 [936.9, 956.9](v);
Inner Zone per 916.9 [936.9 956.9] (f)(4)(B)	40 ft.	70% per 916.9 [936.9 956.9] (f)(4)(B)3.	7 largest trees /ac. per 916.9 [936.9 956.9] (f)(4)(B)4.	Increase QMD; No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(4)(D)
Outer Zone per 916.9 [936.9 956.9] (f)(4)(C)	30 ft.	50% per 916.9 [936.9 956.9] (f)(4)(C).	NA	Commercial thinning or single tree selection only; Retain wind firm trees.	Preferred Management Practices in 916.9 [936.9, 956.9] (f)(4)(D)
ELZ Applicable only where even-aged regeneration used adjacent to the WLPZ	25 ft.	NA	NA	All other Forest Practice Rules	All other Forest Practice Rules

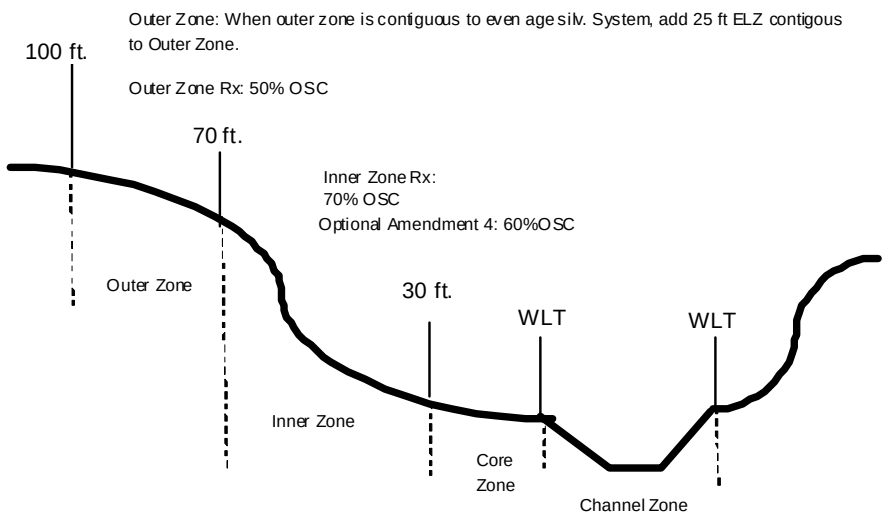
Figure 6: Graphic of profile view of Class I WLPZ with confined channels outside watersheds in the coastal anadromy zone (not to scale)



Outer Zone:
Modified commercial thinning or single tree selection
50% overstory canopy (OSC)

Inner Zone:
Modified commercial thinning or single tree selection
Increase QMD
No Sanitation Salvage
70% OSC
Retain 7 largest trees/ac.

~~**Figure 6: Graphic in profile view of Class I WLPZ with confined channels outside watersheds in the coho salmon ESU (not to scale)**~~ **Note: Delete graphic below**



~~**(f)** The minimum WLPZ width for Class I waters shall be 150 feet from the watercourse or lake transition line. Where a proposed THP is located within the Sacramento or San Joaquin river drainages, and the Director and DFG concur; the RPF may explain and justify other WLPZ widths on areas where even aged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions, or rehabilitation will not be utilized adjacent to watercourse and lake protection zones and where slopes are less than 30%.~~

(g) Class II watercourses -

The following are the minimum requirements for Class II WLPZ delineation and ~~for~~ timber operations ~~in Class II WLPZs~~. Differing rules are specified for watersheds in the coastal anadromy zone, the Southern Subdistrict of the Coast Forest District,and areas outside the coastal andromy zone~~coho salmon ESU~~. WLPZ width ranges from 50 to 100 feet slope distance, depending on side slope steepness in the WLPZ and the watercourse type.

(1) Determine the Class II Watercourse Type: Class II watercourses are composed of two types - Class II-S (standard) watercourses and Class II-L (large) watercourses. A Class II-L watercourse is defined as a Class II watercourse that: (i) can supply water and nutrients to a Class I watercourse during the month of July during an average hydrologic year; (ii) can supply coarse and fine sediment to the Class I channel; and (iii) may be able to supply wood of a size that would function as large wood for the Class I watercourse. Identification of Class II-L watercourse types shall be based on ~~one or more of~~ the office method~~s~~ specified under 14 CCR § 916.9 [936.9, 956.9] subsection (g) (1) (A), ~~and t~~The field methods specified under 14 CCR § 916.9 [936.9, 956.9], subsection (g) (1) (B) may be used to justify proposed modifications to the results of the office determination. Class II-S watercourses are those classified as Class II watercourses pursuant to 14 CCR § 916.5 [936.5, 956.5], but do not meet the definition of a Class II-L watercourse.

(A) Office-based approaches to identify ~~potential~~ Class II-L watercourses:

1. ~~Stream order:~~ After classifying the watercourses in an area pursuant to 14 CCR § 916.5 [936.5, 956.5], map all ~~Class II~~ watercourses in the plan area ~~of consideration on area of consideration on current 1:24,000 scale U.S. Geological Survey topographic maps and "order" them~~ and upslope in the watershed, at a level of detail sufficient to determine the stream order of all Class II watercourses in the plan

area. Stream order shall be determined following the stream order method in 14 CCR 895.1. Second order ~~and third order~~ and higher Class II watercourses shall be identified as~~are potentially~~ Class II-L watercourses.

~~**2. "Blue Line" streams:** Watercourses mapped with a blue or black line on current 1:24,000 scale U.S. Geological Survey topographic maps that are not Class I are inferred to be Class II-L watercourses.~~

~~**3. Drainage area:** A calculated drainage area known to produce mid-late summer flow based on past plan experience or local knowledge for an ownership or local region and extrapolated over the ownership or local area can indicate a Class II-L watercourses.~~

(B) Field-based approaches ~~to identify potential Class II-L: Determination of Class II-L watercourses shall be verified in the field by direct channel observations and local experience~~ may be used to modify the office-based determinations, if supported by substantial evidence certified as accurate by a Registered Professional Forester and explained and justified using one or more of the following approaches.

1. ~~Determine by d~~Direct observation and documentation that there is no surface flow contribution to ~~or by local knowledge of common mid-summer flow conditions if office mapped Class II-L watercourses contribute flow~~ a Class I watercourse later than ~~at least through approximately~~ July 15th following a year of ~~with at least~~ average precipitation and runoff as determined from the 30-year average precipitation data available from NOAA, USGS, or CAL FIRE.

2. A detailed analysis demonstrating that the water temperature in the Class I watercourse will not be significantly impacted by harvesting in the tributary watercourse's WLPZ. This can be accomplished using measured/estimated tributary and main stream flow data and water temperature data that are input into Brown's

(1980) “mixing ratio” equation. Specifically, the adjusted water temperature in the receiving Class I watercourse is not to exceed either 62.1 degrees F presented as the Maximum Weekly Average Temperature (MWAT) or 64.4 degrees F presented as the Maximum Weekly Maximum Temperature (MWMT). Very minimal mid to late-summer tributary streamflow may not be ecologically significant, particularly when the water temperature in the main stream is well below known requirements for the listed anadromous salmonids present.~~**2.** Observe channel characteristics such as channel width at bankfull stage, channel depth at bankfull stage, channel slope, mean entrenchment ratio, the presence of springs or seeps, and the presence of aquatic animal and plant life that require mid-summer flow.~~

3. Use continuous temperature or streamflow monitoring data from the watercourse to determine existence of surface flow contribution to a Class I watercourse later than July 15th following a year of average precipitation and runoff as determined from the 30-year average precipitation data available from NOAA, USGS, or CAL FIRE. ~~headwater watercourses to determine the watershed drainage area necessary to initiate mid-summer streamflow for a given ecoregion and extrapolate this data to other headwater basins in that ecoregion.~~

~~**(C)** Based on (A) and (B) above, make a determination if the portion of the Class II watercourse being evaluated meets the definition of a Class II-L watercourse in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(4).~~

(C)~~(D)~~ Include documentation in the plan explaining how the Class II-L determination(s) were made within the plan area.

(D)~~(E)~~ All Class II-L watercourses designated above shall incorporate requirements stated in 14 CCR § 916.9 [936.9, 956.9], (g)(2) for a minimum distance of 1000 feet ~~***[OPTIONAL AMENDMENT 12 (replaces 1000 feet) 650 feet]***~~ or total length of

Class II-L, which ever is less, measured from the confluence with a Class I watercourse. All portions of a Class II – L watercourse extending upstream beyond 1,000 feet in length shall receive protection in conformance with 14 CCR §§ 916 [936, 956] through 916.7 [936.7, 956.7], in addition to the requirements listed under 14 CCR §§ 916.9 [936.9, 956.9] (g)(2)(A) and (B).

(E)~~**(F)**~~ Each portion of a Class II-L watercourse shall be designated on a map included in the plan as either a Class II-S ~~standard~~ or Class II-L type watercourse.

[OPTIONAL AMENDMENT 102 replaces (1) above : (1) Determine the Class II Watercourse Type: Class II watercourses are composed of two types - Class II-S (standard) watercourses and Class II-L (large) watercourses. A Class II-L watercourse is defined as a Class II watercourse that: (i) can supply water and nutrients to a Class I watercourse during the month of July during an average hydrologic year; (ii) can supply coarse and fine sediment to the Class I channel; and (iii) may be able to supply wood of a size that would function as large wood for the Class I watercourse. Identification of Class II-L watercourse types shall be based on one or more of the office methods specified under 14 CCR § 916.9 [936.9, 956.9] subsection (g) (1) (A) and the field methods specified under 14 CCR § 916.9 [936.9, 956.9], subsection (g) (1) (B). Class II-S watercourses are those classified as Class II watercourses pursuant to 14 CCR § 916.5 [936.5, 956.5], but do not meet the definition of a Class II-L watercourse.

(A) Office-based approaches to identify potential Class II-L watercourses:

1. Stream order: After classifying the watercourses in an area pursuant to 14 CCR § 916.5 [936.5, 956.5], map all Class II watercourses in the area of consideration on current 1:24,000 scale U.S. Geological Survey topographic maps and determine stream order following the stream order method in 14 CCR 895.1. Second order and third order Class II watercourses are potentially Class II-L watercourses.

2. "Blue Line" streams: Watercourses mapped with a blue or black line on current 1:24,000 scale U.S. Geological Survey topographic maps that are not Class I are inferred to be Class II-L watercourses.

3. Drainage area: A calculated drainage area known to produce mid-late summer flow based on past plan experience or local knowledge for an ownership or local region and extrapolated over the ownership or local area can indicate a Class II-L watercourses.

(B) Field-based approaches to identify potential Class II-L: Determination of Class II-L watercourses shall be verified in the field by direct channel observations and local experience using one or more of the following approaches.

1. Determine by direct observation or by local knowledge of common mid-summer flow conditions if office mapped Class II-L watercourses contribute flow to a Class I watercourse at least through approximately July 15th following a year with at least average precipitation.

2. Observe channel characteristics such as channel width at bankfull stage, channel depth at bankfull stage, channel slope, mean entrenchment ratio, the presence of springs or seeps, and the presence of aquatic animal and plant life that require mid-summer flow.

3. Use continuous streamflow monitoring data from headwater watercourses to determine the watershed drainage area necessary to initiate mid-summer streamflow for a given ecoregion and extrapolate this data to other headwater basins in that ecoregion.

(C) Based on (A) and (B) above, make a determination if the portion of the Class II watercourse being evaluated meets the definition of a Class II-L watercourse in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(4).

(D) Include documentation in the plan explaining how the Class II-L determination(s) were made within the plan area.

(E) All Class II-L watercourses designated above shall incorporate requirements stated in 14 CCR § 916.9 [936.9, 956.9], (g)(2) for a minimum distance of 650 feet, or total length of Class II-L, which ever is less, measured from the confluence with a Class I watercourse.]

(2) Class II WLPZ widths and operational requirements : All Class II WLPZs shall be composed of two zones regardless of the watercourse type: a Core Zone and an Inner Zone. The Core Zone is nearest to the water, the Inner Zone is contiguous to the Core Zone and is furthest from the water. The width of the Core and Inner Zones vary depending on the followingflowing three factors: (i) side slope steepness in the WLPZ, (ii) whether the watercourse is a Class II-S standard or Class II-L watercourse type, and (iii) whether the watercourse is within a watershed in the coastal anadromy zonecoho salmon ESU or outside the coastal anadromy zonecoho ESU. Graphic depictions of zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 7.

(A) Core Zone: The width of Core zone varies from 0 feet to 30 feet measured from the watercourse or lake transition line. When established, no timber operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or practices approved pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in § 916.9 [936.9, 956.9], subsections (s), (t), and (u). Table 4¥. summarizes the minimum width for the Core Zone.

Table 4. Core and Inner Zone widths.

Water Class	**Class II-S (feet)**				**Class II-L (feet)**			
Geographic location	**Watersheds in the coastal anadromy zone**		**Watersheds outside the coastal anadromy zone**		**Watersheds in the coastal anadromy zone**		**Watersheds outside the coastal anadromy zone**	
Slope class	Core Zone (feet)	Inner Zone (feet)	Core Zone (feet)	Inner Zone (feet)	Core Zone (feet)	Inner Zone (feet)	Core Zone (feet)	Inner Zone (feet)
<10%	0	50	0	50	30	70	20	80
10%-30%	15	35	10	40	30	70	20	80
30-50%	15	60	10	65	30	70	20	80
>50%	15	85	10	90	30	70	20	80

~~Table Y. Core / Inner Zone widths.~~

~~**Slope Class**~~	~~**Class II standard (feet)**~~		~~**Class II-L (feet)**~~	
	~~**watersheds in coho ESU**~~	~~**non coho ESU watersheds**~~	~~**watersheds in coho ESU**~~	~~**non coho ESU watersheds**~~
~~<10%~~	~~0/50~~	~~0/50~~	~~30/70~~	~~20/80~~
~~10% 30%~~	~~15/35~~	~~10/40~~	~~30/70~~	~~20/80~~
~~30 50%~~	~~15/60~~	~~10/65~~	~~30/70~~	~~20/80~~
~~>50%~~	~~15/85~~	~~10/90~~	~~30/70~~	~~20/80~~

[

[OPTIONAL AMENDMENT 13 (replaces Table Y, deletes Class II standard in Core Zone]

Table Y. Core / Inner Zone widths.

Slope Class	**Class II-L (feet)**	
	coho ESU watersheds	**non coho ESU watersheds**
<30%	30/70	20/80
30-50%	30/70	20/80
≥50%	30/70	20/80

(B) Inner Zone: The widths of the Inner Zone vary from 35 feet to 980 feet and shall be measured from the landward edge of Core Zone or WTL, which ever is greater. Timber operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsections (c)(2)and (4), pursuant to 14 CCR § 916.9 [936.9,956.9], subsections (e)(1) (A)-(F) or pursuant to 14 CCR § 916.9 [936.9,956.9] subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Inner Zone widths are summarized in Table 4Y.

1. Class II-S standard watercourses: Any Class II-S standard watercourses shall receive protection in conformance with 14 CCR §§ 916 [936, 956] through 916.7 [936.7, 956.7]. in addition to the requirements listed under 14 CCR §§ 916.9 [936.9, 956.9] (g)(2)(A) and (B).

2. Class II-L watercourses in the coastal anadromy zonecoho salmon ESU: Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

(i) When commercial thinning is used, t~~T~~he QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

(ii) Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9,956.9].

(iii) Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 70% overstory canopy cover in the Northern Forest District of the coastal anadromy zone. The postharvest canopy may be composed of both conifers and hardwood species ~~(preferential to salmonid species such as alder)~~ and shall have at least 25% overstory conifer canopy. ~~***[OPTIONAL AMENDMENT 4 (replaces subsection 3. above)*** *Postharvest stand shall have a minimum 60% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]*~~

~~***[OPTIONAL AMENDMENT 5 (replaces subsection 3. above)*** *Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast Forest Practice District of the coho salmon ESU and a minimum 60% overstory canopy cover in the Northern Forest Practice District of the coho salmon ESU. The postharvest canopy may be composed of both conifers and hardwood species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]***~~

(iv) Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones. ~~***[OPTIONAL AMENDMENT 6 (adds language)*** *The RPF may propose to substitute smaller*~~

~~*diameter trees when consistent with 14 CCR § 916.9 [936.9, 956.9], subsection (f) (2)(B)(5.). The RPF must explain and justify in the plan why the proposed substitution is more conducive to current and long-term large woody debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.]*~~

(v) Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (g)(2)(B)2.~~(iv)~~(i-iii) above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (~~i.e.~~ e.g., trees ~~with significant~~ that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

~~***(vi)[OPTIONAL AMENDMENT 7 (adds language)***~~

~~Angular Canopy Density shall not be reduced below 80% in the post-harvest stand.]~~

~~***(vii) [OPTIONAL AMENDMENT 8 (adds language)***~~

~~*Postharvest basal area stocking shall have 250 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by coastal redwood, 200 square feet or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by Douglas-fir forest type, and 180 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by mixed conifer or any other conifer forest types not mentioned in this subsection. Postharvest basal area stocking levels shall have at least 25% overstory conifer canopy, when existing in the preharvest*~~

~~*stand. In lieu practices, alternate prescriptions or site specific plans developed pursuant 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be proposed for postharvest basal area stocking lower than the values above. These proposals shall include a collection of relevant stand data and growth modeling to show how the proposal will shorten the time required to provide an increasing number of large trees that contributes to properly functioning salmonid habitat. Guidance for procedures can be found in Flood Prone Area Considerations in the Coast Redwood Zone (Riparian Protection Committee Report, Cafferata et al 2005).]*~~

3. Class II-L watercourses outside watersheds in the coastal anadromy zone~~coho salmon ESU~~: Silvicultural systems for harvesting are limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

(i) When commercial thinning is used, t~~T~~he QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

(ii) Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9,956.9], subsections (s), (t), and (u).

(iii) Postharvest stand shall have a minimum 70% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species ~~(preferential to salmonid species such as alder)~~ and shall have at least 25% overstory conifer canopy. ~~***[OPTIONAL AMENDMENT 4 (replaces subsection 3. above)***~~ ~~*Postharvest stand shall have a minimum 60% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood*~~

~~species (preferential to salmonid species such as alder) and shall have at least 25% overstory conifer canopy.]~~

(iv) Postharvest stand shall retain the 7 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones. ~~***[OPTIONAL AMENDMENT 6 (adds language)*** *The RPF may propose to substitute smaller diameter trees when consistent with 14 CCR § 916.9 [936.9, 956.9], subsection (f)(2)(B)(5.). The RPF must explain and justify in the plan why the proposed substitution is more conducive to current and long-term large woody debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.~~

(v) Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (g)(2)(B)3. ~~(iv)~~(i-iii) above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (~~i.e.~~ e.g., trees ~~with significant~~ that lean towards the channel, have an unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

~~**(vi)** ***[OPTIONAL AMENDMENT 7 (adds language)*** *Angular Canopy Density shall not be reduced below 80% in the post-harvest stand.]~~

~~**(vii)** ***[OPTIONAL AMENDMENT 8 (adds language)*** *Postharvest basal area stocking shall have 250 square foot/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by coastal redwood, 200 square foot or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by Douglas-fir forest type, and*

~~*180 square feet/acre or greater where greater than 50% of the preharvest dominant and codominant conifer stand is occupied by mixed conifer or any other conifer forest types not mentioned in this subsection. Postharvest basal area stocking levels shall have at least 25% overstory conifer canopy, when existing in the preharvest stand. In lieu practices, alternate prescriptions or site specific plans developed pursuant 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be proposed for postharvest basal area stocking lower than the values above. These proposals shall include a collection of relevant stand data and growth modeling to show how the proposal will shorten the time required to provide an increasing number of large trees that contributes to properly functioning salmonid habitat. Guidance for procedures can be found in Flood Prone Area Considerations in the Coast Redwood Zone (Riparian Protection Committee Report, Cafferata et al 2005).]*~~

[Optional Amendment 103 replaces (2) above)

(2) Class II WLPZ widths and operational requirements : All Class II WLPZs widths and operational requirements vary depending on the following three factors: (i) side slope steepness in the WLPZ, (ii) whether the watercourse is a Class II-S or Class II-L watercourse type, and (iii) whether the watercourse is within a watershed in the coastal anadromy zone or outside the coastal anadromy zone. Table 4. summarizes the minimum width for Class II watercourses. Graphic depictions of zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 7.

Table 4. Core and Inner Zone widths.

Water Class	**Class II-S**	**Class II-L**			
Geographic location	**All watersheds**	**Watersheds in the coastal anadromy zone**		**Watersheds outside the coastal anadromy zone**	
Slope class	WLPZ widths per 14 CCR 916.5 [936.5, 956.5 (feet)	Core Zone (feet)	Inner Zone (feet)	Core Zone (feet)	Inner Zone (feet)
<30%	50	25	75	15	85
30-50%	75	25	75	15	85
>50%	100*	25	75	15	85

* Subtract 25 feet width for cable yarding operations

(A) Class II-S watercourses shall receive the following protection requirements:

1. Conformance with 14 CCR §§ 916 [936, 956] through 916.7 [936.7, 956.7.

2. Retain all trees in the WLPZ which show visible indicators of providing bank or bed stability, except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or practices approved pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (v). Visible indicators of stability include roots that permeate the bank or provide channel grade control.

3. Sanitation-Salvage is prohibited except as provided in § 916.9 [936.9, 956.9], subsections (s), (t), and (u).]

(B) Class II-L watercourses

1. Core Zone: No timber operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e) (1)(A)-(F), or practices

approved pursuant to 14 CCR § 916.9 [936.9,956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

2. Inner Zone: Timber operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsections (c)(2)and (4), pursuant to 14 CCR § 916.9 [936.9,956.9], subsections (e)(1) (A)-(F) or pursuant to 14 CCR § 916.9 [936.9,956.9] subsection (v). Harvesting prescriptions should focus on practices that use thinning from below with silvicultural systems limited to the use of the commercial thinning or single tree selection modified to meet the following requirements:

(i) When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

(ii) Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9,956.9].

(iii) Postharvest stand shall have a minimum 60% total canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.]=

(iv) For Class II-L watercourses in the coastal anadromy zone, postharvest stand shall retain the 7 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.. For Class II-L watercourses outside the coastal anadromy zone, postharvest stand shall retain the 4 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones..

(v) Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (g)(2)(B)2.(i-iii) above that are the most conducive to recruitment to provide for the beneficial functions of riparian zones (e.g., trees that lean towards the channel, have an

unimpeded fall path toward the watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such an unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

(3) Class II watercourses in the Southern Subdistrict of the Coast Forest District

In addition to all other Forest Practice Rules applicable to timber harvesting within the Southern Subdistrict of the Coast Forest District, the following rules apply within a Class II WLPZ. These requirements supersede any other requirements for Class II watercourses contained in 14 CCR § 916.9 (g).

(A). Retain all trees within the Class II WLPZ that meet the following criteria:

1. all trees located within the channel zone;

2. all trees that have boles that overlap the edge of the channel zone; and

3. all trees with live roots permeating the bank or providing channel grade control, with the following exception:

(i) 1/3 of the stems of redwoods with live roots permeating the bank or providing channel grade control may be harvested.

(B) Where sufficient spacing exists prior to harvesting, retained redwood trees greater than or equal to 12 inches dbh shall not be spaced more than 25 feet apart.

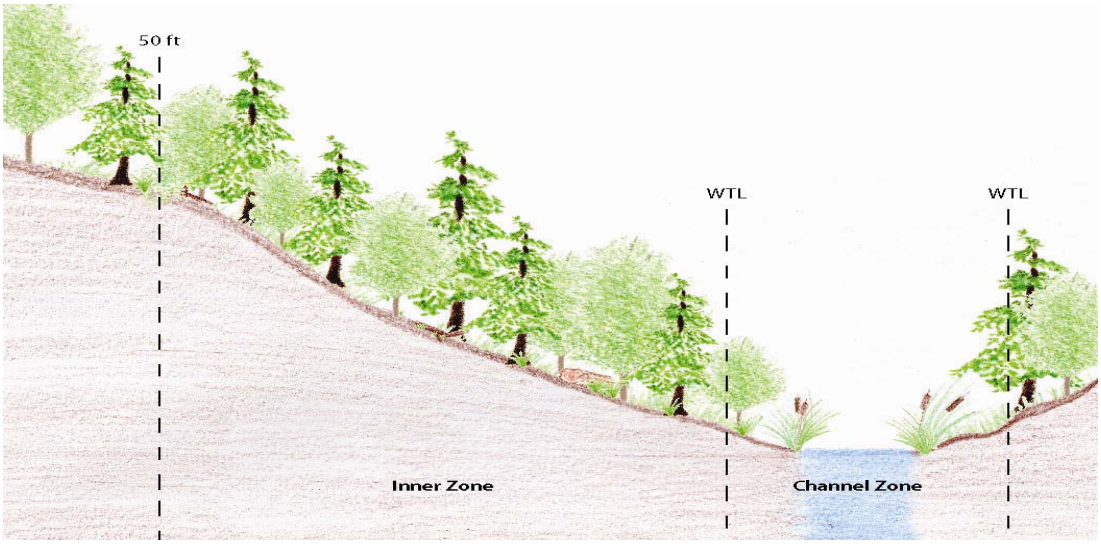
(C) A minimum of 80% overstory canopy shall be maintained within the channel zone. If 80% overstory canopy is not present within the channel zone, the existing overstory canopy within the channel shall not be reduced.

(D) No more than 1/3 of the conifers 18" dbh or larger may be harvested.

Figure 7: Graphic of profile view of WLPZs for Class II Watercourses (excluding the Southern Subdistrict) (not to scale)

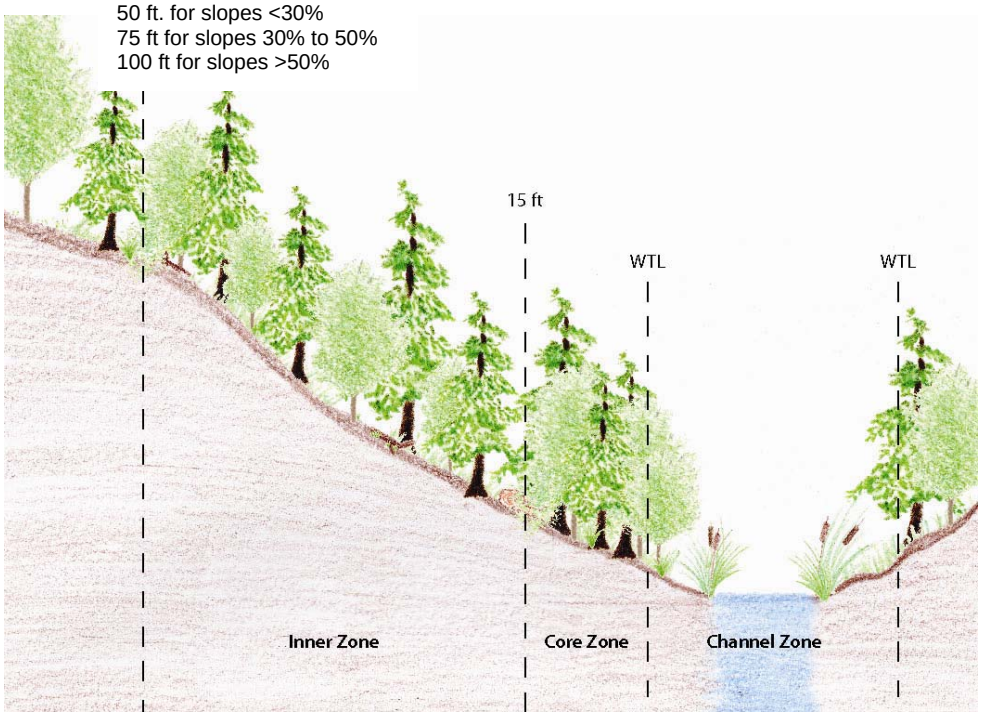
Class II Standard – Slopes <10%

Inner Zone: FPRs in 14 CCR 916 -916.7



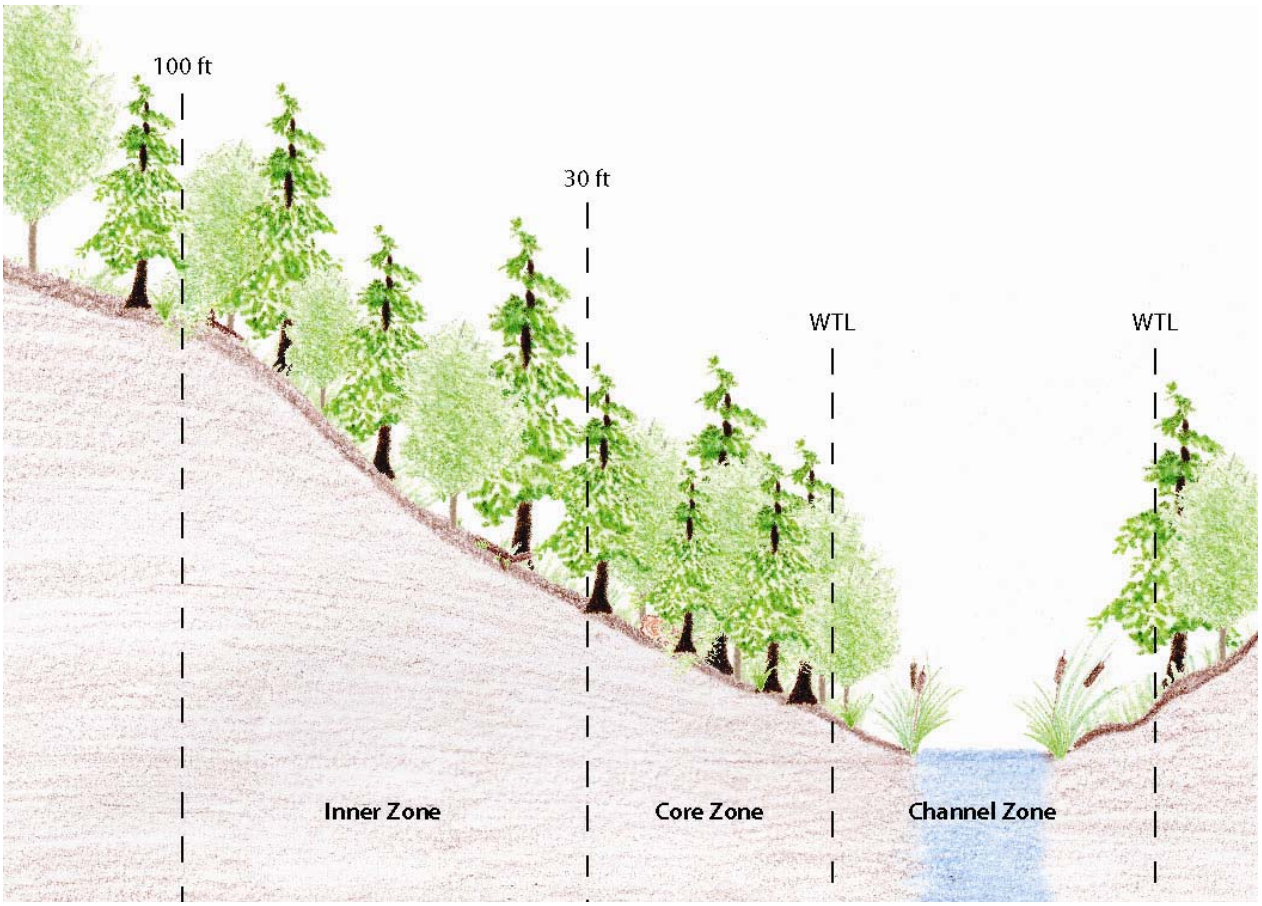
Class II Standard - Watersheds in the coastal anadromy zone

Inner Zone: FPRs in 14 CCR 916 -916.7



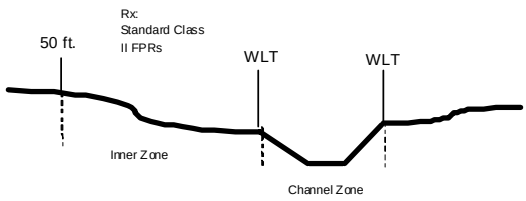
Class II Large - Watersheds in the coastal anadromy zone

Inner Zone:
Modified commercial thinning or single tree selection
Increase QMD
No Sanitation Salvage
Retain 80% OSC in the Coast and Southern Forest Districts of the coastal anadromy zone and 70% OSC in the Northern Forest District of the coastal anadromy zone
Retain 13 largest trees/ac.



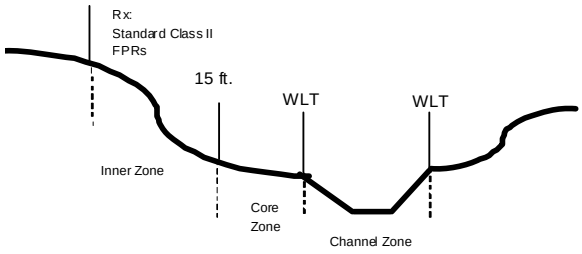
~~**Figure 7: Graphic in profile view of WLPZs for Class II Watercourses in watersheds in the coho salmon ESU (not to scale)**~~ **Note delete graphics below**

Class II Standard WLPZ in watersheds in the coho salmon ESU < 10% slope

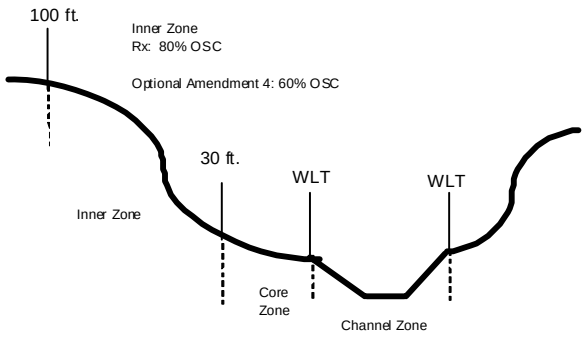


Class II Standard WLPZ - watersheds in the coho salmon ESU

50 ft with slopes <30%
75 ft. with slopes 30% to 50%
100 ft with slopes >50%



Class II Large WLPZ - watersheds in the coho ESU



~~**(g)** Within a WLPZ for Class I waters, at least 85 percent overstory canopy shall be retained within 75 feet of the watercourse or lake transition line, and at least 65 percent overstory canopy within the remainder of the WLPZ. The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. Where a proposed THP is located within the Sacramento or San Joaquin river drainages, and the Director and DFG concur; the RPF may explain and justify other canopy retention standards on areas where even aged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions, or rehabilitation will not be utilized adjacent to watercourse and lake protection zones and where slopes are less than 30%. Harvesting of hardwoods shall only occur for the purpose of enabling conifer regeneration.~~

(h) Class III watercourses –

The following are the minimum requirements for timber operations in Class III watercourses ~~in watersheds with listed anadromous salmonids~~, unless explained and justified in the plan and approved by the Director.

(1) Establish a 30 foot wide ELZ on both sides of the watercourse for slopes less than 30% and an additional 20 foot ELZ where sideslopes are >30%. The ELZ is measured from the WTL~~WLT~~. Within the ELZ:

(A) no new construction of tractor roads permitted;

(B) no ground based equipment on slopes >50%; and

(C) ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse~~without visible evidence of sediment deposition to the adjacent channels zone~~ or to the use of feller- bunchers or shovel yarding.

(2) Retain all pre-existing large wood on the ground within the ELZ that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.

~~***[OPTIONAL AMENDMENT 15 (replaces (4))*** *Retain all pre-existing non-merchantable large wood on the ground within the ELZ that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.~~

(3) Retain all pre-existing down wood and debris in the channel zone.

(4) ~~Retain hardwoods, where feasible, within the 30 ft. wide ELZ.~~

~~***[OPTIONAL AMENDMENT 16 (replaces (4))*** *Retain non-merchantable hardwoods, where feasible, within the 30 ft ELZ.]*~~ ***[OPTIONAL AMENDMENT 17 (replaces (4))***Retain hardwoods, where feasible, within the ELZ.~~]~~

[Option 104 replace (4) above: (4) Retain hardwoods, where feasible, within the ELZ for 25 feet measured from the WTL.]

(5) Retain all snags (except as required for safety) within the ELZ.

(6) ~~Retain all countable trees needed to achieve resource conservation standards in 14 CCR § 912.7 [932.7, 952.7] within the 30 ft. ELZ.~~

~~***[OPTIONAL AMENDMENT 18 (replaces (6))*** *Retain all non-merchantable countable trees needed to achieve resource conservation standards in 14 CCR § 912.7 [932.7, 952.7] within the 30 ft. ELZ.]***~~

[OPTIONAL AMENDMENT 19 (replaces (6)) Retain all countable trees needed to achieve resource conservation standards in 14 CCR § 912.7 [932.7, 952.7] within the ELZ.~~***]***~~

[Option 105 replace (6) above: Retain all non-merchantable conifers within the ELZ except as necessary for cable corridors, crossing construction, and safety reasons.]

(7) Retain all trees in the ELZ and channel zone~~, excluding sprouting conifers that do not have boles overlapping the channel zone,~~ which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade

control.

(8) Exceptions pursuant to 14 CCR § 916.9 [936.9, 956.9, subsections (e)(1) (A)-(F) are permitted in any ELZ and channel zone.

~~**(h)** For Class I waters, any plan involving timber operations within the WLPZ shall contain the following information:~~

~~**(1)** A clear and enforceable specification of how any disturbance or log or tree cutting and removal within the Class I WLPZ shall be carried out to conform with 14 CCR 916.2 [936.2, 956.2](a) and 916.9 [936.9, 956.9](a).~~

~~**(2)** A description of all existing permanent crossings of Class I waters by logging roads and clear specification regarding how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages.~~

~~**(3)** Clear and enforceable specifications for construction and operation of any new crossing of Class I waters to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage, or other potential impairment of beneficial uses of water.~~

(i) Section reserved for future use. ~~Recruitment of large woody debris for aquatic habitat in Class I anadromous fish-bearing or restorable waters shall be ensured by retaining the ten largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones. The retained conifers shall be selected from within the THP area that lies within 50 feet of the watercourse transition line. Where the THP boundary is an ownership boundary, a class I watercourse, and the WLPZ on both sides of the watercourse currently meets the stocking standards listed under 14 CCR § 912.7 [932.7,952.7](b)(2)]; the five (5) largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones within the THP area shall be retained within 50 feet of the~~

~~watercourse transition line.~~

~~The RPF may propose alternatives to substitute smaller diameter trees, trees that are more than 50 feet from the watercourse transition line, or other alternatives on a site specific basis. The RPF must explain and justify in the THP why the proposed alternative is more conducive to current and long-term Large Woody Debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.~~

(j) Inner Gorge - Where an inner gorge extends beyond a Class I WLPZ*****outside a WLPZ.

(k) Year-round logging road, landing and tractor road use limitations -

~~From October 15 to May 1, the following shall apply: (1)no timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7(a) [934.7(a), 954.7(a)], (2)unless the winter period operating plan proposes operations during an extended period with low antecedent soil wetness, no tractor roads shall be constructed, reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III watercourse, as measured from the watercourse or lake transition line,. and operations of trucks and heavy on logging roads and landings shall be limited to those with a stable operating .~~

(1) Logging roads, landings or tractor roads shall not be used when visibly turbid water from the road, landing or tractor road (skid trail) or an inside ditch associated with the logging road, landing or tractor road may reach a watercourse or lake in amounts sufficient to cause a turbidity increase in Class I, II, III or IV waters.

(2) Log hauling on logging roads and landings shall be limited to those which are hydrologically disconnected from watercourses to the extent feasible, and exhibit ~~with~~ a stable operating surface in conformance with (1) above.

(3) Concurrent with use for log hauling, approaches to logging road watercourse crossings shall be treated for erosion control as needed to minimize soil erosion and sediment transport and to prevent the discharge of sediment into watercourses and lakes in quantities deleterious to the beneficial uses of water.

(4) Concurrent with use for log hauling, all traveled surfaces of logging roads in a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection shall be treated for erosion control as needed to minimize soil erosion and sediment transport and to prevent the discharge of sediment into watercourses and lakes in quantities deleterious to the beneficial uses of water.

(5) Grading to obtain a drier running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.

(l) Extended Wet Weather Period ~~**Winter period operations** - Construction or reconstruction of logging roads, tractor roads, or landings shall not take place during the winter period unless the approved plan incorporates a complete winter period operating plan pursuant to 14 § CCR 914.7(a) [934.7(a), 954.7(a)] that specifically address such road construction . Use of logging roads, tractor roads, or landings shall not take place at any location where saturated soil conditions exist, where a stable logging road or landing operating surface does not exist, or when visibly turbid water from the road, landing, or skid trail surface or inside ditch may reach a watercourse or lake. Grading to obtain a drier running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.~~ From ~~-~~October 15 to May 1 shall be considered the extended wet weather period and the following shall apply: ~~:~~

(1) No timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7 [934.7, 954.7] subsection (a) that specifically addresses, where applicable, proposed logging road~~-~~, landing~~-~~ or tractor road construction, reconstruction and~~or~~ use during the extended wet

weather period. Where logging road watercourse crossing construction or reconstruction is proposed an implementation schedule shall be specified.

(2) Unless the winter period operating plan proposes operations during an extended wet weather period with low antecedent soil wetness, no tractor roads shall be constructed, reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III watercourse, as measured from the watercourse or lake transition line during the extended wet wether period~~.~~ ~~and~~

(3) Logging roads, landings and tractor roads shall not be used when sediment from the logging road, landing or tractor road surface is transported to a watercourse or a drainage facility that discharges into a watercourse in amounts sufficient to cause a visible increase in turbidity in Class I, II, III, or IV waters.

(4) Logging roads and landings shall not be used for log hauling when saturated soil conditions result in the visible increase in turbidity specified in (3) above.

(m) Tractor Road Drainage Facility Installation- All Tractor roads*****

*****(n) **Treatments to stabilize soils -** Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent the discharge of sediment into watercourses or lakes in amounts deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements, shall be described in the plan as follows. ~~applied in accordance with the following standards:~~

~~**(1)** The following requirements shall apply to all such treatments.~~

~~**(A)** They shall be described in the plan.~~

~~**(B)** For areas disturbed from May 1 through October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface.~~

~~**(C)** For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.~~

[OPTIONAL AMENDMENT 20 (deletes existing language in (2)) ~~***(2)*** *The traveled surface of logging roads shall be treated to prevent waterborne transport of sediment and concentration of runoff that results from timber operations.*~~ **]**

~~(3)~~**(1)** The treatment for other disturbed areas, including: Soil stabilization is required for the following areas:

(A) ~~a~~Areas exceeding 100 contiguous square feet where timber operations have exposed bare soil~~,~~.

(B) ~~a~~Approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing~~,~~.

(C) Disturbed road cut banks and fills, and

(D) ~~a~~Any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water~~,~~.

(2) Soil stabilization treatment measures may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, ~~rip-rapping~~, ~~grass~~ seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical soil stabilizers. ~~Where straw, mulch, or slash is used, the minimum coverage shall be 90%, and any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of timber operations. The RPF may propose alternative treatments that will achieve the same level of erosion control and sediment discharge prevention.~~

~~**(4)** Where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from timber operations, the ground shall be treated by measures including, but not~~

~~limited to, seeding, mulching, or replanting, in order to retain and improve its natural ability to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes.~~

(3) Where straw or slash mulch is used, the minimum straw coverage shall be 90 percent, and any treated area that has been reused or has less than 90 percent surface cover shall be treated again by the end of timber operations.

(4) [OPTIONAL AMENDMENT 21 (adds language) *Where slash mulch is packed into the ground surface through the use of a tractor or equivalent piece of heavy equipment the minimum slash coverage shall be 75 percent.]*

(5) For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface. ***[OPTIONAL AMENDMENT 22 (adds language)*** *that could deliver sediment into a watercourse or lake in quantities deleterious to the beneficial uses of water.]*

(6) For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.

(7) [OPTIONAL AMENDMENT 23 (adds language) *Where the natural ability of ground cover is inadequate to protect beneficial uses of water by minimizing soil erosion or by filtering sediment, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.]*

(o) Erosion Site identification and remedies- As part of the , plan , the RPF shall: **(1)** ~~i~~Identify ~~active erosion~~ sites in the logging area. where erosion and sediment production are

ongoing during any period of the year and which pose significant risks to the beneficial uses of water~~,~~.

(2) ~~a~~Assess ~~them~~ those sites identified in 14 CCR § 916.9 [936.9, 956.9], subsection (o)(1) to determine whether feasible remedies exist.

(3) ~~and address in the planned feasible remediation for all sites that pose significant wristed beneficial uses of water~~ For sites that pose significant risks to the beneficial uses of water and where feasible remedies exist, the plan shall propose appropriate treatment.

(p) Erosion control maintenance period- The erosion control maintenance period*****shall be three years.

(q) Site preparation - Site preparation activities shall be designed***** under14 CCR 915.4 [936.4, 956.4]

(r) Water drafting - Water drafting for timber operations shall:

(1) Comply with~~Require a notification to the Department of Fish and Game under~~ Fish and Game Code Section 1600, et seq.

(A) Timber operations conducted under a Fish and Game Code Section 1600 master or long-term agreement that includes water drafting may provide proof of such coverage for compliance with this paragraph.

(2) Describe the water drafting site conditions and proposed water drafting activity in the plan, including:

(A) a general description of the conditions and proposed water drafting;

(B) a map showing proposed water drafting locations;

C) the watercourse classification;

(D) the drafting parameters including the months the site is proposed for use; estimated total volume needed per day; estimated maximum instantaneous drafting rate and filling time; and disclosure of other water drafting activities in the same watershed;

(E) the estimated drainage area (acres) above the point of diversion;

(F) the estimated unimpeded streamflow, pumping rate, and drafting duration,

(G) a discussion of the effects on aquatic habitat downstream from the drafting site(s) of single pumping operations, or multiple pumping operations at the same location, and at other locations in the same watershed;

(H) a discussion of proposed alternatives and measures to prevent adverse effects to fish and wildlife resources, such as reducing hose diameter; using gravity-fed tanks instead of truck pumping; reducing the instantaneous or daily intake at one location; describing allowances for recharge time; using other dust palliatives; and drafting water at alternative sites; and

(I) The methods that will be used to measure source streamflow prior to the water drafting operation and the conditions that will trigger streamflow to be measured during the operation.

(3) All water drafting for timber operations are subject to each requirement below unless the Department of Fish and Game modifies the requirement in the Lake or Streambed Alteration agreement that authorized the drafting operation, or unless otherwise specified below:

(A) All intakes shall be screened to prevent impingement of juvenile fish against the screen. The following requirements apply to screens and water drafting on Class I waters:

1. Openings in perforated plate or woven wire mesh screens shall not exceed 3/32 inches (2.38 millimeters). Slot openings in wedge wire screens shall not exceed 1/16 inches (1.75 millimeters).

2. The screen surface shall have at least 2.5~~3.0~~ square feet of openings submerged in water.

3. The drafting operator shall regularly inspect, clean, and maintain screens to ensure proper operation whenever water is drafted.

4. The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.

5. The diversion rate shall not exceed 350 gallons per minute.

(B) Approaches and associated drainage features to drafting locations within a WLPZ or channel zone shall be surfaced with rock or other suitable material to minimize generation of sediment.

(C) Barriers to sediment transport, such as straw waddles, logs, straw bales or sediment fences, shall be installed outside the normal high water mark to prevent sediment delivery to the watercourse and limit truck encroachment.

(D) Water drafting trucks parked on streambeds and floodplains shall use drip pans or other devices such as absorbent blankets, sheet barriers or other materials as needed to prevent soil and water contamination from motor oil or hydraulic fluid leaks.

(E) Bypass flows for Class I watercourses shall be provided in volume sufficient to avoid dewatering the watercourse and maintain aquatic life downstream, and shall conform to the following standard:

1. Bypass flows in the source stream during drafting shall be at least 2 cubic feet per second.

2. Diversion rate shall not exceed 10 percent of the surface flow.

3. Pool volume reduction shall not exceed 10 percent.

(F) The drafting operator shall keep a log that records for each time water is drafted, the date, total pumping time, pump rate, starting time, ending time, and volume diverted. Logs shall be filed with the Department of Forestry and Fire Protection at the end of seasonal operations and maintained with the plan record. This requirement may be modified in the approved plan that covers the water drafting, but only with concurrence from the Department of Fish and Game.

(G) Before commencing any water drafting operation, the RPF and the drafting operator shall conduct a pre-operations field review to discuss the water drafting measures in the plan and/or Lake or Streambed Alteration Agreement.

~~***(r) Water drafting - [OPTIONAL AMENDMENT 25 (replaces entire existing language in (r))*** *Water drafting shall not result in significant stream flow reductions during critical low water periods except pursuant to an approved DFG Streambed Alteration Agreement (SAA) or in conformance with 14 CCR 916.9 [936.9, 956.9] subsection (r) (3). Water drafting for timber operations from within a channel zone of a natural watercourse or from a natural lake shall:~~

~~***(1)*** *Comply with Fish and Game Code Section 1600, et seq, where applicable.~~

~~***(2)*** *If the plan proposes water drafting under an approved SAA issued by DFG, the SSA shall be included as an enforceable part of the plan. Supporting information used in review of the SAA may be referenced.~~

~~***(3)*** *For new water drafting locations not already permitted, the plan shall contain as part of the SAA notification, the following information:~~

~~***(A)*** *A description and map of proposed water drafting locations,~~

~~***(B)*** *The watercourse classification at each drafting site,~~

~~***(C)*** *The drafting parameters for each site (i.e., seasonal timing, estimated total volume needed per day, estimated pumping rate and filling time,~~

~~(D) Estimated unimpeded streamflow, and duration of reduction,~~

~~(E) A discussion of the effects of single pumping operations, or multiple pumping operations at the same location, and drafting activities at other locations in the same watershed,~~

~~(F) A discussion of proposed alternatives and measures to prevent adverse effects (for example e.g., reduction in hose diameter; use of gravity fed tanks versus truck pumping; reduction in instantaneous or daily intake at one location; described allowances for recharge time; other dust palliatives; and alternative water drafting locations),~~

~~(G) The methods to be used to determine source flow prior to operations and the conditions that will trigger flow to be measured,~~

~~(H) A requirement that the RPF, responsible for providing professional advice, and the licensed timber operator conduct a pre-operations field review to discuss water drafting measures in the plan.~~

~~(2) All water drafting shall conform to the following requirements:~~

~~(A) All intakes shall be screened. Screens on Class I waters shall be as follows:~~

~~1. Openings in perforated plate or woven wire mesh screens shall not exceed 3/32 inches (2.38 millimeters). Slot openings in wedge wire screens shall not exceed 1.75 millimeters.~~

~~2. The screen surface shall have at least 2.33 square feet of openings.~~

~~*3. The drafting operator shall actively observe the drafting operation. Pumping shall cease and the screen cleaned if it becomes more than 10 percent obstructed with debris.*~~

~~*4. The approach velocity (water moving through the screen) shall not exceed 0.33 feet/second.*~~

~~*5. The diversion (i.e. pumping) rate shall not exceed 350 gallons per minute (gpm).*~~

~~*(B) Approaches and associated drainage structures and facilities to drafting locations within a WLPZ or channel zone shall be surfaced with rock or other suitable material to avoid generation of sediment.]*~~

[Optional Amendment 106 replaces (r) above: (r) Water drafting for timber operations from within a channel zone of a natural watercourse or from a lake shall conform with the following standards:

(1) The RPF shall incorporate into the THP:

(A) a description and map of proposed water drafting locations,

(B) the watercourse or lake classification, and

(C) the general drafting location use parameters (i.e., yearly timing, estimated total volume needed, estimated total uptake rate and filling time, and associated water drafting activities from other THPs).

(2) On Class I and Class II streams where the RPF has estimated that:

(A) bypass flows are less than 2 cubic feet per second, or

(B) pool volume at the water drafting site would be reduced by 10%, or

(C) diversion rate exceeds 350 gallons per minute, or

(D) diversion rate exceeds 10% of the above surface flow;

no water drafting shall occur unless the RPF prepares a water drafting plan to be reviewed and, if necessary a stream bed alteration agreement issued, by DFG and approved by the Director. The Director may accept the project description and conditions portion of an approved "Streambed Alteration Agreement" issued under the Fish and Game Code (F&GC 1600 et seq.) which is submitted instead of the water drafting plan described in 14 CCR § 916.9 [936.9, 956.9] (r)(2)(D)(1-5).

The water drafting plan shall include, but not be limited to:

1. disclosure of estimated percent streamflow reduction and duration of reduction,

2. discussion of the effects of single pumping operations, or multiple pumping operations at the same location,

3. proposed alternatives and discussion to prevent adverse effects (e.g. reduction in hose diameter, reduction in total intake at one location, described allowances for recharge time, and alternative water drafting locations),

4. conditions for operators to include an operations log kept on the water truck containing the following information: Date, Time, Pump Rate, Filling Time, Screen Cleaned, Screen Conditions, and Bypass flow observations,

5. a statement by the RPF for a pre-operations field review with the operator to discuss the conditions in the water drafting plan.

(3) Intakes shall be screened in Class I and Class II waters. Screens shall be designed to prevent the entrainment or impingement of all life stages of fish or amphibians. Screen specifications shall be included in the plan.

(4) Approaches to drafting locations within a WLPZ shall be surfaced with rock or other suitable material to avoid generation of sediment.

(r) Water drafting for timber operations from within a channel zone of a natural watercourse or from a lake shall conform with the following standards:

(1) The RPF shall incorporate into the THP:

(A) a description and map of proposed water drafting locations,

(B) the watercourse or lake classification, and

(C) the general drafting location use parameters (i.e., yearly timing, estimated total volume needed, estimated total uptake rate and filling time, and associated water drafting activities from other THPs).

(2) On Class I and Class II streams where the RPF has estimated that:

(A) bypass flows are less than 2 cubic feet per second, or

(B) pool volume at the water drafting site would be reduced by 10%, or

(C) diversion rate exceeds 350 gallons per minute, or

(D) diversion rate exceeds 10% of the above surface flow;

no water drafting shall occur unless the RPF prepares a water drafting plan to be reviewed and, if necessary a stream bed alteration agreement issued, by DFG and approved by the Director. The Director may accept the project description and conditions portion of an approved "Streambed Alteration Agreement" issued under the Fish and Game Code (F&GC 1600 et seq.) which is submitted instead of the water drafting plan described in 14 CCR § 916.9 [936.9, 956.9] (r)(2)(D)(1-5).

The water drafting plan shall include, but not be limited to:

1. disclosure of estimated percent streamflow reduction and duration of reduction,

2. discussion of the effects of single pumping operations, or multiple pumping operations at the same location,

~~**3.** proposed alternatives and discussion to prevent adverse effects (e.g. reduction in hose diameter, reduction in total intake at one location, described allowances for recharge time, and alternative water drafting locations),~~

~~**4.** conditions for operators to include an operations log kept on the water truck containing the following information: Date, Time, Pump Rate, Filling Time, Screen Cleaned, Screen Conditions, and Bypass flow observations,~~

~~**5.** a statement by the RPF for a pre-operations field review with the operator to discuss the conditions in the water drafting plan.~~

~~**(3)** Intakes shall be screened in Class I and Class II waters. Screens shall be designed to prevent the entrainment or impingement of all life stages of fish or amphibians. Screen specifications shall be included in the plan.~~

~~**(4)** Approaches to drafting locations within a WLPZ shall be surfaced with rock or other suitable material to avoid generation of sediment.~~

(s) Exemption notices - No timber operations are allowed in a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection, under exemption notices except for:

(1) ~~h~~Hauling on existing roads~~,~~.

(2) ~~r~~Road maintenance~~,~~.

(3) ~~o~~Operations conducted for public safety~~,~~.

(4) ~~c~~Construction or reconstruction of approved watercourse crossings~~,~~.

(5) ~~t~~Temporary crossings of dry Class III watercourses ~~which~~that do not require ~~"Streambed Alteration Agreement"~~ notification under Fish and Game Code §1600 et seq~~,~~. ~~or~~

(6) ~~h~~Harvesting recommended in writing by DFG to address specifically identified forest conditions.

(t) Emergency notices - No timber operations are allowed in a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection, under emergency notices except for:

(1) ~~h~~Hauling on existing roads~~,~~.

(2) ~~r~~Road maintenance~~,~~.

(3) ~~o~~Operations conducted for public safety~~,~~.

(4) ~~c~~Construction or reconstruction of approved watercourse crossings~~,~~.

(5) ~~t~~Temporary crossings of dry Class III watercourses ~~which~~that do not require ~~"Streambed Alteration Agreement"~~ notification under Fish and Game Code §1600 et seq~~,~~.

(6) ~~h~~Harvesting recommended in writing by DFG to address specifically identified forest conditions~~,~~.

(7) ~~t~~The harvest of dead or dying conifer trees subject to the following conditions:

***(*A)** Retention of all trees in the core zone of Class I and Class II-L watercourses. ~~Recruitment of large woody debris for aquatic habitat in Class I and Class II-L anadromous fish-bearing or restorable WLPZs shall be ensured by retaining the ten 13 largest dbh conifers (live or dead) per 330 feet of stream channel length acre for plans in watersheds in the coho salmon ESU and 7 largest dbh conifers (live or dead) per acre in watersheds outside the coho salmon ESU, that are the most conducive to recruitment to provide for the beneficial functions of riparian zones. The retained conifers shall be selected from within the area of operations that lies within 50 feet of the watercourse transition line. Where the area of operations is bounded by an ownership boundary that corresponds with a class I watercourse, and where the WLPZ on both sides of the watercourse currently meets the stocking standards listed under 14 CCR § 912.7 [932.7,952.7](b)(2), the five (5) largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones shall be retained within 50 feet of the watercourse transition line within the area of operations.~~

~~The RPF may provide alternatives to substitute smaller diameter trees, trees that are more than 50 feet from the watercourse transition line, or other alternatives on a site-specific basis.~~

~~The RPF must provide with the notice an explanation and justification why the alternative provided is more conducive to current and long-term L~~l~~arge W~~w~~oody D~~d~~ebris recruitment, shading, bank stability, and the beneficial functions of riparian zones.~~

(B) Within any WLPZ, ELZ, or EEZ designated for Class II or III watercourse protection, a minimum of two dead, dying, or diseased conifer trees per acre at least 16 inches diameter breast high and 50 feet tall shall be retained within 50 feet of the watercourse transition line.

(C) Trees to be harvested or retained shall be marked by, or under the supervision of, an RPF prior to timber operations within the WLPZ or ELZ/EEZ.

(D) Within the WLPZ or ELZ/EEZ, if the stocking standards of 14 CCR § 912 [932, 952].7 are not met upon completion of timber operations, unless the area meets the definition of substantially damaged timberlands, at least ten trees shall be planted for each tree harvested but need not exceed an average point count of 300 trees per acre.

(u) Salvage logging - No salvage logging *****for streamside salvage operations.

(v) Site-specific measures or nonstandard operational provisions -

(1) In consideration of the spatial variability of the forest landscape, the RPF may propose site-specific measures or nonstandard operational provisions in place of any of the provisions contained in this section. Site specific plans may be submitted when, in the judgment of the RPF, such measures or provisions offer a more effective or more feasible way of achieving the goals and objectives set forth in 14 CCR § 916.9 [936.9, 956.9], subsections (a) and (c), and would result in effects to the beneficial functions of the riparian zone equal to or more favorable than those expected to result from the application of the operational provisions required under 14 CCR § 916.9 [936.9, 956.9].

[OPTIONAL AMENDMENT 26 (replaces text from line 16-18 in (1) above) ~~*In consideration of the spatial variability of the forest landscape, the RPF may propose site specific measures or nonstandard operational provisions when, in the judgment of the RPF, such measures or provisions offer a more effective or more feasible way of achieving the goals and objectives set forth in 14 CCR § 916.9 [936.9, 956.9], subsections (a) and (c),*~~ *and would*

result in improved beneficial functions of the riparian zone.]

(2) Measures or provisions proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (v) shall only be approved when the plan incorporates an evaluation of the beneficial functions of the riparian zone as set forth in subsection (3) below., In the event of measures limited in applicability to specific sites, the submitter may instead of an evaluation, obtain written concurrence from DFG prior to plan submittal. RPFs may request a preconsultation for the site specific plan and the Director may agree and provide staff from responsible agencies.~~or after consultation and written concurrence from DFG prior to plan submittal.~~

(3) The evaluation of the beneficial functions of the riparian zone shall be included in addition to any evaluation required by all other District Forest Practice Rules, may incorporate by reference any such evaluation, and shall include the following components scaled appropriately to the scope of the proposed measure(s) or provision(s) and the beneficial functions potentially affected.

(A) The following are required components of an evaluation conducted pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v)(3):

1. A description of the evaluation area. If the evaluation area is different than the watershed assessment area described pursuant to Technical Rule Addendum No. 2, the RPF shall briefly explain the rationale for establishing the evaluation area.

2. A description of the current condition of the riparian zone within the evaluation area related to the beneficial functions. The RPF may incorporate by reference any conditions described in the plan pursuant to 14 CCR § 916.4 [936.4, 956.4], subsection (a). The RPF shall use the best available information, at the appropriate scale, to describe the existing vegetation, timber stand characteristics, roads, skid trails, landings,

channel types, unstable areas, flood prone areas, and overflow channels.

3. An identification of the beneficial functions that may potentially be affected by the proposed measure(s) or provision(s).

4. An identification of the potential effects to the beneficial functions, both positive and negative. The RPF may use a reasoned analysis to describe the effects and may assign ratings of high, moderate and low to those effects that may individually or cumulatively limit anadromous salmonid distribution and abundance in the watershed.

5. A detailed description of the site-specific measure(s) or nonstandard operational provision(s) proposed. The description should address at a minimum the relationships between the riparian stand characteristics and ecological functions, the relative importance of the beneficial functions of the riparian zone to the watercourse, the cost effectiveness of the measure(s) or provision(s), and the predicted consequences.

6. A schedule for implementing proposed management practices.

7. A plan for monitoring consistent with 14 CCR § 916.11.

(4) Measures or provisions proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (v) shall only be approved when they meet the following additional standards:

(A) They must be based upon the best available science, and explained and justified in the plan.

(B) They must identify potential significant adverse impacts that may occur to listed salmonids or the beneficial functions of the riparian zone as a result of the proposed measure(s) or provision(s).

(C) They must identify feasible systems, methods, procedures or approaches proposed to avoid or mitigate identified potential significant adverse impacts to a level of insignificance.

(D) They must be written so they provide clear instructions and enforceable standards for the timber operator;

(E) They must provide that, where appropriate for implementation of the measure(s) or provision(s), the plan submitter is responsible for retaining an RPF to aid in interpreting the plan to the timber operator and timberland owner on a continuing basis to help assure compliance with the measure(s) or provision(s).

(F) They must identify each standard prescription that~~which~~ would be replaced by the measure(s) or provision(s) proposed.

(5) Guidance is provided below for site specific plans for flood prone areas:

(A) Site-Specific Plans for watercourses with flood prone areas or channel migration zones**:** This section is an optional approach to be used at the discretion of the plan submitter. When used, this section replaces requirements found in 14 § 916.9 [936.9, 956.9], subsection (f)(3). The goal of this approach is to allow RPFs to develop a site specific plan for salmonid habitat protection on a flood prone area. Site specific plans are to lead to development of properly functioning salmonid habitat and can include active management to restore the beneficial uses of the riparian zone.

(B) Timber operations are limited to the flood prone areas beyond the outer margin of a CMZ.

(C) RPFs are to propose riparian protection zones and management practices that are designed for local conditions.

(D) Site specific assessments shall include:

1. Identifying the issues that need to be considered for watercourse and riparian protections [refer to Table 1 of "*Flood Prone Area Considerations in the Coast Redwood Zone* "(Riparian Protection Committee Report, Cafferata et al 2005)

2. Describing processes that need to be considered for the issues identified above.

3. Developing a method to define a desired trajectory for watercourse and riparian conditions in the context of the goals of 14 CCR 916.9[936.9,956.9], subsection (a).

4. Defining how the proposed operations will aid reaching the desired trajectories.

5. Disclosing assumptions being made at each step and limits to both the science and the proposed management activities.

6. Identifying how to determine what needs to be monitored and how to conduct the monitoring.

7. Supporting documentation is required including but not limited to field data, NetMap analysis, large wood modeling results, etc.

(E) As described in the "*Flood Prone Area Considerations in the Coast Redwood Zone*" (Cafferata et al 2005), the site-specific plan for Class I flood prone area management shall include:

1. an inventory of the flood prone area for all hydrologic, geomorphic, and biological functions present that can be affected by timber operations;

2. a determination of the category of inundation where management is proposed [i.e., very frequent (1-5 yr recurrence interval or RI), frequent (5-20 yr RI), moderately frequent (20-50 yr RI), or infrequent (50+ yr RI)]; and

3. an appropriate analysis for functions present in light of possible significant adverse impacts from management. Analysis for hydrologic functions may include how the flood prone area vegetative roughness will change with timber operations. Analyses for geomorphic functions may include how proposed operations will change bank stabilization,

amount of soil disturbance on the flood prone area, and the potential for channel avulsion. Analyses for biological functions may include how harvesting will affect overflow channels, large wood recruitment, stream shading, riparian microclimate, organic matter input, and terrestrial wildlife habitat.

(F) Disclosure and analysis requirements increase with increased risk associated with the proposed level of activity and the increased frequency of inundation in the flood prone area. In particular, management proposed within the 20 year recurrence interval flood prone area in a watershed with coho salmon habitat or restorable habitat requires detailed analysis.

(G) In addition to considering how proposed prescriptions will affect flood prone area functions at the project level, site specific plans must consider a larger watershed perspective that includes consideration of the stream network and past activities in the watershed. Also, consideration must be given to the current condition of the flood prone area.

(H) Information provided in the "*Flood Prone Area Considerations in the Coast Redwood Zone* " (Cafferata et al 2005) is to be used for guidance in the coast redwood zone.

(I) The site-specific plan for Class I riparian management must: (1) have Review Team agencies pre-consultation and receive concurrence from the Review Team agencies, including DFG, and (2) include a monitoring component.

(6) Guidance is provided below for site specific plans for fire hazard reduction:

(A) For site specific plans that address WLPZs having conditions where catastrophic, stand replacing wildfire will result in significant adverse effects to salmonid species, riparian habitat or other wildlife species, the site specific plan shall address measure(s) or provision(s) that create fire resilient forests, promote reduced fire intensities, and retain functional habitat following a wildfire. Site specific plans proposed for fuel hazard reduction shall contain information demonstrating the potential for severe fire behavior and likelihood of stand replacing fires. Fuel reduction measure(s) or

provision(s) shall be designed to reduce fire behavior to levels appropriate for the region and riparian area. Measure(s) or provision(s) include, but are not limited to, activities that result in maximum four-foot flames lengths under average severe fire conditions [**Optional Amendment 107 deletes line 3 above:** …result in maximum four-foot flames lengths under average severe fire conditions,….] eliminate the vertical and horizontal continuity among all vegetative fuels layer (surface fuels, ladder fuels and crown fuels), focus on reducing surface and ladder fuel hazards, and simultaneously meet goals and objectives of 14 CCR § 916.9 [936.9, 956.9] subsections (a) and (c).

(7)~~(5)~~ No site-specific measure(s) or nonstandard operational provision(s) proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be prescribed by an RPF or approved by the Director in lieu of the following rules:

(A) The rules contained in Subchapter 2 (Application of Forest Practice Rules); Article 2 (Definitions, Ratings, and Standards) and Article 11 (Coastal Commission Special Treatment Areas) of Subchapter 4 (Coast Forest District Rules); Article 2 (Definitions, Ratings, and Standards) of Subchapter 5 (Northern Forest District Rules); Article 2 (Definitions, Ratings, and Standards) and Article 11 (Coastal Commission Special Treatment Areas) of Subchapter 6 (Southern Forest District Rules); and Subchapter 7 (Administration) of Chapter 4, Division 1.5 of the California Administrative Code; or

(B) Any rule pertaining to the width of the special treatment area adjacent to a wild and scenic river declared pursuant to PRC 5093.50, et seq.; or

(C) Any rules or parts of rules that incorporate practices or standards specified in the Forest Practice Act.

(8)~~(6)~~ The Director shall not accept for inclusion in a plan any site-specific measures or non-standard operational provisions as described in this section where the Department of Fish and Game or where two or more agencies listed in PRC § 4582.6 and 14 CCR §

1037.3 have submitted written comments which lead to the Director's conclusion that the proposed measures or provisions will not meet the goal of this section and the agencyies participated in the review of the plan, including an on-the-ground inspection. ***[OPTIONAL AMENDMENT 27 (replaces item (8)~~(6)~~ text above) (8)~~(6)~~*** *If the Director finds, based upon substantial evidence in the record, that the proposed site-specific measure(s) or nonstandard operational provision(s): (A) achieve the goals and objectives set forth in 14 CCR § 916.9 [936.9, 956.9], subsections (a) and (c); (B) will not result in significant individual or cumulative adverse impacts; (C) is consistent with other applicable laws and regulations, and (D) would result in improved beneficial functions of the riparian zone, the Director shall accept the measure(s) or provision(s) for inclusion in the plan***]***. ~~***[OPTIONAL AMENDMENT 28 (replace text in (6) above) (6)***~~ ~~*If the Director finds, based upon substantial evidence in the record, that the proposed site-specific measure(s) or nonstandard operational provision(s): (A) achieve the goals and objectives set forth in 14 CCR § 916.9 [936.9, 956.9], subsections (a) and (c); (B) will not result in significant individual or cumulative adverse impacts; (C) is consistent with other applicable laws and regulations, and (D) would result in effects to the beneficial functions of the riparian zone equal to or more favorable than those expected to result from the application of the operational provisions required under 14 CCR § 916.9 [936.9, 956.9], the*~~

~~*Director shall accept the measure(s) or provision(s) for inclusion in the plan.]*~~

~~(9)~~~~**(7)**~~ Site-specific measures or nonstandard operational provisions proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v) shall not be considered alternative practices pursuant to 14 CCR §§ 897 or 914.9 [934.9, 954.9], in lieu practices or site specific practices pursuant to 14 CCR § 916.1 [936.1, 956.1], or alternative prescriptions for the protection of watercourses or lakes pursuant to 14 CCR § 916.~~9~~6 [936.6, 956.6].

(10) Board staff and the Department shall work with agencies, stakeholders, and appropriate scientific participants (e.g., Monitoring Study Group, Technical Advisory Committee) in a transparent process to: (1) describe and implement two pilot projects, including monitored results, using site-specific or non-standard operational provisions; and (2) provide recommendations to the Board for consideration for adoption as a technical addendum or in similar form, to provide detailed guidance for the application of site-specific nor non-standard operational provisions. The pilot projects and guidance shall address cumulative and planning watershed impacts, and the guidance may address the appropriate standard site-specific or non-operational provisions shall meet. A report on the progress of the pilot projects and implementation guidance shall be presented to the Board within 18 months of the effective date of this regulation.

~~**(v)** Nonstandard practices (i.e., waivers, exceptions, in-lieu practices, and alternative practices) shall comply with the goal set forth in subsection (a) above as well as with the other requirements set forth in the rules.~~

~~**(w)** The Director may approve alternatives provided the alternative practice will achieve the goal of this section. The Director shall not accept for inclusion in a plan any alternative practice as described in this section where two or more agencies listed in 4582.6 of the PRC and 14 CCR § 1037.3 have submitted written comments which lead to the Director's conclusion that the proposed alternative will not meet the goal of this section and the agency(ies) participated in the review of the plan, including an on-the-ground inspection.~~

~~**(x)** Other measures that would effectively achieve the goal set forth in 14 CCR § 916.9(a) [936.9(a), 956.9(a)] may be approved in accordance with 14 CCR 916.6 [936.6, 956.6].~~

~~(y)~~**(w)** Except when expressly required by 14 CCR § 916.9 [936.9, 956.9], subsections (w)(1)- (5) below, ~~The provisions of 14 CCR § 916.9 [936.9, 956.9] shall not apply to a plan where there is:~~ the provisions of 14 CCR § 923.9 [943.9, 963.9] shall not apply to a plan that is subject to: ~~an incidental take permit based upon an approved Habitat Conservation Plan that addresses anadromous salmonid protection.~~

(1) a valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code that addresses anadromous salmonid protection; or

(2) a federal incidental take statement or incidental take permit that addresses anadromous salmonid protection, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or

(3) a valid natural community conservation plan that addresses anadromous salmonid protection approved by DFG under section 2835 of the Fish and Game Code; or

(4) a valid Habitat Conservation Plan that addresses anadromous salmonid protection, approved under Section 10 of the federal Endangered Species Act of 1973; or

(5) project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and DFG in preparation of obtaining a natural community conservation plan that addresses anadromous salmonid protection.

~~**(z)** This section shall expire on December 31, 2008.~~

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 and 13050(f), Water Code; and Sections 1600 and 5650(c), Fish and Game Code.

Amend 14 CCR § 916.11 . [936.11, 956.11]. Effectiveness and Implementation Monitoring.

(a) Where timber operations will be conducted within a WLPZ, the Director may require a post-harvest evaluation of the effectiveness of the mitigations and practices designed to protect the watercourse(s) or lake(s) as a condition of plan approval. The Director shall require such an evaluation if the necessity for the evaluation is supported by substantial evidence in the record. This evidence may include, but is not limited to, potential land failures, accelerated rate of road construction or harvesting within a watershed, concentration or intensity of harvesting activity near watercourses, and potential for accelerated windthrow. The design and implementation of the evaluation shall be done in consultation with the Director, the RWQCB or DFG, and THP submitter, and the sufficiency of the information requested by the Director shall be judged in light of reasonableness and practicality. The evaluation may utilize procedures including, but not limited, to:

(1) Procedures for effectiveness and implementation monitoring,
(2) Existing landowner monitoring programs, or
(3) Photographic monitoring

~~**(b)** This section shall expire on December 31, 2008.~~

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 and 13050(f), Water Code; and Sections 1600 and 5650(c), Fish and Game Code.

Amend 14 CCR § 916.12. [936.12, 956.12] Section 303(d) Listed Watersheds.

For any planning watershed in which timber operations could contribute to the pollutants or stressors which have been identified as limiting water quality in a water body listed pursuant to 303(d) Federal Clean Water Act, the following shall apply:

(a) The Department shall, in collaboration with the appropriate RWQCB and SWRCB, prioritize watersheds in which the following will be done: 1) conduct or participate in any further assessment or analysis of the watershed that may be needed, 2) participate in the development of Total Maximum Daily Load (TMDL) problem assessment, source assessment, or load allocations related to timber operations, and 3) if existing rules are deemed not to be sufficient, develop recommendations for watershed-specific silvicultural implementation, enforcement and monitoring practices to be applied by the Department.

(b) The Department shall prepare a report setting forth the Department's findings and recommendations from the activities identified pursuant to (a) above. The report shall be submitted to the Board and the appropriate RWQCB. The report shall be made available to the public upon request and placed on the Boards' website for a 90-day period.

(c) Where the Department has recommended that the adoption of watershed specific rules is needed, the Board shall consider that recommendation as a proposal for rulemaking under the Administrative Procedures Act (Section 11340 et. seq. Gov Code) and shall begin that process within 180 days following receipt of that report.

(d) These watershed specific rules shall be developed in collaboration with the appropriate RWQCB, the landowner(s) or designee with land in the planning watershed, and other persons or groups within the watershed, and may also be incorporated into a TMDL implementation plan.

(e) The watershed specific rules shall remain in effect until the water body has been removed from the 303(d) list, or that the Board finds, after consulting with the appropriate RWQCB, that timber operations are no longer a significant source of the pollutant or stressor that limits water quality in the listed water body.

~~**(f)** When assessing cumulative impacts of a proposed project on any portion of a waterbody that is located within or downstream of the proposed timber operation and that is listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the degree to which the proposed operations would result in impacts that may combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse effect on the environment. The plan preparer shall provide feasible mitigation measures to reduce any such impacts from the plan to a level of insignificance, and may provide measures, insofar as feasible, to help attain water quality standards in the listed portion of the waterbody. The Director's evaluation of such impacts and mitigation measures will be done in consultation with the appropriate RWQCB.~~

~~**(f)** This section shall expire on December 31, 2008.~~

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 and 13050(f), Water Code; and Sections 1600 and 5650(c), Fish and Game Code.

Amend 14 CCR § 923.3.[943.3, and 963.3] Watercourse Crossings.

Watercourse crossing drainage structures on logging roads shall be planned, constructed, reconstructed, and maintained or removed, according to the following standards. Exceptions may be provided through application of Fish and Game Code Sections ~~1601 and 1603~~ 1600 et seq. and shall be included in the THP.

(a) The location of all new permanent watercourse crossing drainage structures and temporary crossings located within the WLPZ shall be shown on the THP map. If the structure

is a culvert intended for permanent use, the minimum diameter of the culvert shall be specified in the plan. ~~Extra culverts beyond those shown in the THP map may be installed as necessary.~~

(b) The number of crossings shall be kept to a feasible minimum.

(c) Drainage structures on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and shall be fully described in the plan in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.

(d) When watercourse crossings, other drainage structures, and associated fills are removed the following standards shall apply:

(1) Fills shall be excavated to form a channel that is as that close as feasible to the natural watercourse grade and orientation, and that is wider than the natural channel.

(2) The excavated material and any resulting cut bank shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. Where needed, this material shall be stabilized by seeding, mulching, rock armoring, or other suitable treatment.

(e) All permanent watercourse crossings that are constructed or reconstructed shall accommodate the estimated 100-year flood flow, including debris and sediment loads.

~~***[OPTIONAL AMENDMENT 30 (adds language in (e))*** *Exceptions may be explained and justified in the plan and approved by the Director where existing crossings, located in the same physiographic environment, have remained intact and undamaged following stressing storms.* ***]***~~

(f) ~~Permanent~~ Wwatercourse crossings and associated fills and approaches shall be constructed or maintained to prevent diversion of stream overflow down the road and to minimize fill erosion should the drainage structure become obstructed. The RPF may propose an exception where explained in the THP and shown on the THP map and justified how the protection provided by the proposed practice is at least equal to the protection provided by the standard rule.

(g) ~~Any~~ All new permanent culverts ~~installed~~ on ~~c~~Class I watercourses~~, based on biological characteristics~~ where fish are always or seasonally present or where fish habitat is restorable~~, which meet the criteria of cClass I waters based on biological characteristics,~~ shall be planned, designed and constructed to allow upstream and downstream passage of fish or listed aquatic

species during any life stage and for the natural movement of bedload to form a continuous bed through the culvert ~~*[**OPTIONAL AMENDMENT 31 (deletes language shown in strikeout)to form a continuous bed through the culvert]***~~ and shall require an analysis and specifications demonstrating conformance with the intent of this section and subsection.

~~**(h)** The amendments to 14 CCR § 923.3 [943.3, 963.3] that became effective July 1, 2000 shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551, 4551.5 and 21004, Public Resources Code. Reference: Sections 4512, 4513, 4551, 4551.5, 4562.5 and 4562.7, Public Resources Code; 40 CFR 130.2(q); and California Case Law: Natural Resources Defense Council, Inc. v. Arcata Natl. Corp. (1972) 59 Cal. App. 3d 959, 131 Cal. Rptr. 172.

Amend 14 CCR § 923.9. [943.9, 963.9] Roads and Landings in Watersheds with Listed~~Threatened or Impaired Values~~ Anadromous Salmonids.

In addition to all other district Forest Practice Rules, the following requirements shall apply in any planning watershed with listed ~~threatened or Impaired Values~~ anadromous salmonids:

(a) Where logging road or landing construction or reconstruction is proposed, the plan shall state the location of, and specifications for, logging road and landing abandonment or other mitigation measures to minimize the adverse effects of long-term site occupancy of the road system within the watershed.

~~***[OPTIONAL AMENDMENT 32 (replaces subsection (a)) Where logging road or landing construction or reconstruction is proposed, the plan shall identify:***~~

~~***(1) How the proposed operations will fit into the systematic layout pattern.***~~

~~*(2) Offsetting mitigation measures, including but not limited to, abandonment of logging roads and landings, needed to minimize potential adverse impacts to watersheds from the road system.*]~~

(b) Unless prohibited by existing contracts with the U.S.D.A. Forest Service or other federal agency, new and reconstructed logging roads shall be no wider than a single-lane compatible with the largest type of equipment specified for use on the road, with adequate turnouts provided as required for safety. The maximum width of these roads shall be specified in the plan. These roads shall be outsloped where feasible and drained with water breaks or rolling dips (where the road grade is inclined at 7 percent or less), in conformance with other applicable Forest Practice Rules.

(c) The following shall apply on slopes greater than 50% that have access to a watercourse or lake**:**

(1) Specific provisions of construction shall be identified and described for all new roads.

(2) Where cutbank stability is not an issue, roads may be constructed as a full-benched cut (no fill). Spoils not utilized in road construction shall be disposed of in ~~with~~ stable areas with less than 30 percent slope and outside of any WLPZ, EEZ, or ELZ~~.~~ designated for watercourse or lake protection. The Director, with concurrence from other responsible agencies, may waive inclusion of these measures where the RPF can show that slope depressions and other natural retention and detentions feature are sufficient to controls overland transport of eroded material.

(3) ~~Alternatively,~~ Logging roads may be constructed with balanced cuts and fills: ~~if properly engineered, or fills may be removed with the slopes recontoured prior to the winter period.~~

(A) If properly engineered, or.

(B) If fills are removed and the slopes recontoured prior to the winter period.

(d) In addition to the provisions listed under 14 CCR § 923.1~~(e)~~ [943.1~~(e)~~, 963.1~~(e)~~], subsection (e), all permanent or seasonal logging roads with a grade of 15% or greater that extends 500 continuous feet or more shall have specific erosion control measures stated in the plan.

(e) ~~Where situations exist that elevate risks to the values set forth in 14 CCR § 916.2(a), [936.2(a), 956.2(a)] subsection (a) (e.g., road networks are remote, the landscape is unstable, water conveyance features historically have a high failure rate, culvert fills are large) drainage structures and erosion control features shall be oversized, low maintenance, or reinforced, or they shall be removed before the completion of the timber operation. The method of analysis and the design for crossing protection shall be included in the plan.~~

~~***[OPTIONAL AMENDMENT 33 (replaces language in (e))***~~ Where logging road networks are remote or are located where the landscape is unstable, where crossing fills over culverts are large, or where logging road watercourse crossing drainage structures and erosion control features historically have a high failure rate, drainage structures and erosion control features shall be oversized, designed for low maintenance, reinforced, or removed before the completion of the timber operation. The method of analysis and the design for crossing protection shall be included in the plan. ~~]~~

(f) Except when expressly required by 14 CCR § 916.9 [936.9, 956.9], subsections (w)(1)- (5) below, ~~The provisions of 14 CCR § 916.9 [936.9, 956.9] shall not apply to a plan where there is:~~ the provisions of 14 CCR § 923.9 [943.9, 963.9] shall not apply to a plan that is subject to: ~~an incidental take permit based upon an approved Habitat Conservation Plan that addresses anadromous salmonid protection.~~

(1) a valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code that addresses anadromous salmonid protection; or

(2) a federal incidental take statement or incidental take permit that addresses anadromous salmonid protection, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or

(3) a valid natural community conservation plan that addresses anadromous salmonid protection approved by DFG under section 2835 of the Fish and Game Code; or

(4) a valid Habitat Conservation Plan that addresses anadromous salmonid protection, approved under Section 10 of the federal Endangered Species Act of 1973; or

(5) project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and DFG in preparation of obtaining a natural community conservation plan that addresses anadromous salmonid protection.

~~**(g)** This section shall expire on December 31, 2009.~~

Note: Authority cited: Sections 4551, 4551.5, 4553, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551, 4551.5, 4562.5, 4562.7, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 and 13050(f), Water Code; Sections 1600 and 5650(c), Fish and Game Code; and Natural Resources Defense Council, Inc. v. Arcata Natl. Corp. (1976) 59 Cal.App. 3d 959, 131 Cal.Rptr. 172.

Amend § 916.9.1 [936.9.1] Protection Measures in Watersheds with Coho Salmon

In addition to all other district Forest Practice Rules, the regulations in 14 CCR § 916.9 [936.9] as amended and effective on January 1, 2010 ~~following requirements~~ shall apply in any planning watershed with coho salmon.~~:~~

~~**(a)** GOAL - Every timber operation shall be planned and conducted to prevent deleterious interference with the watershed conditions that primarily limit the values set forth in 14 CCR 916.2 [936.2](a) (e.g., sediment load increase where sediment is a primary limiting factor; thermal load increase where water temperature is a primary limiting factor; loss of instream large woody debris or recruitment potential where lack of this value is a primary limiting factor; substantial increase in peak flows or large flood frequency where peak flows or large flood frequency are primary limiting factors). To achieve this goal, every timber operation shall be planned and conducted to meet the following objectives where they affect a~~

~~primary limiting factor:~~

~~**(1)** Comply with the terms of a Total Maximum Daily Load (TMDL) that has been adopted to address factors that may be affected by timber operations if a TMDL has been adopted, or not result in any measurable sediment load increase to a watercourse system or lake.~~

~~**(2)** Not result in any measurable decrease in the stability of a watercourse channel or of a watercourse or lake bank.~~

~~**(3)** Not result in any measurable blockage of any aquatic migratory routes for coho salmon or listed species.~~

~~**(4)** Not result in any measurable stream flow reductions during critical low water periods except as part of an approved water drafting plan pursuant to 14 CCR 916.9.1(r) [936.9.1(r)].~~

~~**(5)** Consistent with the requirements of 14 CCR § 916.9.1(i) or 14 CCR § 936.9.1(i); protect, maintain, and restore trees (especially conifers), snags, or downed large woody debris that currently, or may in the foreseeable future, provide large woody debris recruitment needed for instream habitat structure and fluvial geomorphic functions.~~

~~**(6)** Consistent with the requirements of 14 CCR § 916.9.1(g) or 14 CCR § 936.9.1(g); protect, maintain, and restore the quality and quantity of vegetative canopy needed to: **(A)** provide shade to the watercourse or lake, **(B)** minimize daily and seasonal temperature fluctuations, **(C)** maintain daily and seasonal water temperatures within the preferred range for coho salmon or listed species where they are present or could be restored, and **(D)** provide hiding cover and a food base where needed.~~

~~**(7)** Result in no substantial increases in peak flows or large flood frequency.~~

~~**(b)** Pre-plan adverse cumulative watershed effects on the populations and habitat of coho salmon shall be considered. The plan shall specifically acknowledge or refute that such~~

~~effects exist. Where appropriate, the plan shall set forth measures to effectively reduce such effects.~~

~~**(c)** Any timber operation or silvicultural prescription within 150 feet of any Class I watercourse or lake transition line or 100 feet of any Class II watercourse or lake transition line shall have protection, maintenance, or restoration of the beneficial uses of water or the populations and habitat of coho salmon or listed aquatic or riparian-associated species as significant objectives.~~

~~Additionally, for evenaged regeneration methods and rehabilitation with the same effects as a clearcut that are adjacent to a WLPZ, a special operating zone shall retain understory and mid-canopy conifers and hardwoods. These trees shall be protected during falling, yarding and site preparation to the extent feasible. If trees that are retained within this zone are knocked down during operations, that portion of the trees that is greater than 6" in diameter shall remain within the zone as Large Woody Debris. The zone shall be 25 feet above Class I WLPZs with slopes 0-30% and 50 feet above Class I WLPZs with slopes > 30%.~~

~~**(d) (1)** The plan shall fully describe: **(A)** the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed timber operations, and **(B)** the person(s) responsible for the implementation of each measure, if other than the timber operator.~~

~~**(2)** In proposing, reviewing, and approving such measures, preference shall be given to the following: **(A)** measures that are both onsite (i.e., on or near the plan area) and in-kind (i.e., erosion control measures where sediment is the problem), and **(B)** sites that are located to maximize the benefits to the impacted portion of a watercourse or lake. Out-of-kind measures (i.e., improving shade where sediment is the problem) shall not be approved as meeting the requirements of this subsection.~~

~~**(e)** Channel zone requirements~~

~~**(1)** There shall be no timber operations within the channel zone with the following exceptions:~~

~~**(A)** timber harvesting that is directed to improve coho habitat through the limited use of the selection or commercial thinning silvicultural methods with review and comment by DFG.~~

~~**(B)** timber harvesting necessary for the construction or reconstruction of approved watercourse crossings.~~

~~**(C)** timber harvesting necessary for the protection of public health and safety.~~

~~**(D)** to allow for full suspension cable yarding when necessary to transport logs through the channel zone.~~

~~**(E)** Class III watercourses where exclusion of timber operations is not needed for protection of coho salmon.~~

~~**(2)** In all instances where trees are proposed to be felled within the channel zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan prior to the preharvest inspection.~~

~~**(f)** The minimum WLPZ width for Class I waters shall be 150 feet from the watercourse or lake transition line.~~

~~**(g)** Within a WLPZ for Class I waters, at least 85 percent overstory canopy shall be retained within 75 feet of the watercourse or lake transition line, and at least 65 percent overstory canopy within the remainder of the WLPZ. The overstory canopy must be composed of at least 25% overstory conifer canopy post-harvest. Harvesting of hardwoods shall only occur for the purpose of enabling conifer regeneration.~~

~~**(h)** For Class I waters, any plan involving timber operations within the WLPZ shall contain the following information:~~

~~**(1)** A clear and enforceable specification of how any disturbance or log or tree cutting and removal within the Class I WLPZ shall be carried out to conform with 14 CCR 916.2 [936.2](a) and 916.9.1 [936.9.1](a).~~

~~**(2)** A description of all existing permanent crossings of Class I waters by logging roads and clear specification regarding how these crossings are to be modified, used, and treated to minimize risks, giving special attention to allowing fish to pass both upstream and downstream during all life stages.~~

~~**(3)** Clear and enforceable specifications for construction and operation of any new crossing of Class I waters to prevent direct harm, habitat degradation, water velocity increase, hindrance of fish passage, or other potential impairment of beneficial uses of water.~~

~~**(i)** Recruitment of large woody debris for aquatic habitat in Class I coho salmon bearing waters shall be ensured by retaining the ten largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones. The retained conifers shall be selected from within he THP area that lies within 50 feet of the watercourse transition line. Where the THP boundary is an ownership boundary, a class I watercourse, and the WLPZ on both sides of the watercourse currently meets the stocking standards listed under 14 CCR § 912.7 [932.7,952.7](b)(2)); the five (5) largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones within the THP area shall be retained within 50 feet of the watercourse transition line.~~

~~The RPF may propose alternatives to substitute smaller diameter trees, trees that are more than 50 feet from the watercourse transition line, or other alternatives on a site specific basis. The RPF must explain and justify in the THP why the proposed alternative is more conducive to current and long-term Large Woody Debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.~~

~~**(j)** Where an inner gorge extends beyond a Class I WLPZ and slopes are greater than 55%, a special management zone shall be established where the use of evenaged regeneration methods is prohibited. This zone shall extend upslope to the first major break-in-slope to less than 55% for a distance of 100 feet or more, or 300 feet as measured from the watercourse or lake transition line, which ever is less. All operations on slopes exceeding 65% within an inner gorge of a Class I or II watercourse shall be reviewed by a Professional Geologist prior to plan approval, regardless of whether they are proposed within a WLPZ or outside of a WLPZ.~~

~~**(k)** From October 15 to May 1, the following shall apply: **(1)** no timber operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7(a) [934.7(a)], **(2)** unless the winter period operating plan proposes operations during an extended period with low antecedent soil wetness, no tractor roads shall be constructed, reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III watercourse, as measured from the watercourse or lake transition line, and **(3)** operation of trucks and heavy equipment on roads and landings shall be limited to those with a stable operating surface.~~

~~**(l)** Construction or reconstruction of logging roads, tractor roads, or landings shall not take place during the winter period unless the approved plan incorporates a complete winter period operating plan pursuant to 14 § CCR 914.7(a) [934.7(a), 954.7(a)] that specifically address such road construction. Use of logging roads, tractor roads, or landings shall not~~

~~take place at any location where saturated soil conditions exist, where a stable logging road or landing operating surface does not exist, or when visibly turbid water from the road, landing, or skid trail surface or inside ditch may reach a watercourse or lake. Grading to obtain a drier running surface more than one time before reincorporation of any resulting berms back into the road surface is prohibited.~~

~~**(m)** All tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following yarding and prior to either **(1)** the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for watercourse or lake protection, or **(2)** any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.~~

~~**(n)** Within the WLPZ, and within any ELZ or EEZ designated for watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent the discharge of sediment into waters in amounts deleterious to aquatic species or the quality and beneficial uses of water, or that threaten to violate applicable water quality requirements, shall be applied in accordance with the following standards:~~

~~**(1)** The following requirements shall apply to all such treatments.~~

~~**(A)** They shall be described in the plan.~~

~~**(B)** For areas disturbed from May 1 through October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface.~~

~~**(C)** For areas disturbed from October 16 through April 30, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.~~

~~**(2)** The traveled surface of logging roads shall be treated to prevent waterborne~~

~~transport of sediment and concentration of runoff that results from timber operations.~~

~~**(3)** The treatment for other disturbed areas, including: **(A)** areas exceeding 100 contiguous square feet where timber operations have exposed bare soil, **(B)** approaches to tractor road watercourse crossings between the drainage facilities closest to the crossing, **(C)** road cut banks and fills, and **(D)** any other area of disturbed soil that threatens to discharge sediment into waters in amounts deleterious to the quality and beneficial uses of water, may include, but need not be limited to, mulching, rip-rapping, grass seeding, or chemical soil stabilizers. Where straw, mulch, or slash is used, the minimum coverage shall be 90%, and any treated area that has been subject to reuse or has less than 90% surface cover shall be treated again prior to the end of timber operations. The RPF may propose alternative treatments that will achieve the same level of erosion control and sediment discharge prevention.~~

~~**(4)** Where the undisturbed natural ground cover cannot effectively protect beneficial uses of water from timber operations, the ground shall be treated by measures including, but not limited to, seeding, mulching, or replanting, in order to retain and improve its natural ability to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes.~~

~~**(o)** As part of the plan, the RPF shall identify active erosion sites in the logging area, assess them to determine which sites pose significant risks to the beneficial uses of water, assess them to determine whether feasible remedies exist, and address in the plan feasible remediation for all sites that pose significant risk to the beneficial uses of water.~~

~~**(p)** The erosion control maintenance period on permanent and seasonal roads and associated landings that are not abandoned in accordance with 14 CCR § 923.8 [943.8] shall be three years.~~

~~**(q)** Site preparation activities shall be designed to prevent soil disturbance within, and minimize soil movement into, the channels of watercourses. Prior to any broadcast burning, burning prescriptions shall be designed to prevent loss of large woody debris in watercourses, and vegetation and duff within a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection. No ignition is to occur within any WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection. When burning prescriptions are proposed, the measures or burning restrictions which are intended to accomplish this goal shall be stated in the plan and included in any required burning permit. This information shall be provided in addition to the information required under 14 CCR § 915.4 [935.4].~~

~~**(r)** Water drafting for timber operations from within a channel zone of a natural watercourse or from a lake shall conform with the following standards:~~

~~**(1)** The RPF shall incorporate into the THP:~~

~~**(A)** a description and map of proposed water drafting locations,~~

~~**(B)** the watercourse or lake classification, and~~

~~**(C)** the general drafting location use parameters (i.e., yearly timing, estimated total volume needed, estimated total uptake rate and filling time, and associated water drafting activities from other THPs).~~

~~**(2)** On Class I and Class II streams where the RPF has estimated that:~~

~~**(A)** bypass flows are less than 2 cubic feet per second, or~~

~~**(B)** pool volume at the water drafting site would be reduced by 10%, or~~

~~**(C)** diversion rate exceeds 350 gallons per minute, or~~

~~**(D)** diversion rate exceeds 10% of the above surface flow; no water drafting shall occur unless the RPF prepares a water drafting plan to be reviewed and, if necessary~~

~~a stream bed alteration agreement issued, by DFG and approved by the Director. The Director may accept the project description and conditions portion of an approved "Streambed Alteration Agreement" issued under the Fish and Game Code (F&GC 1600 et seq.) which is submitted instead of the water drafting plan described in 14 CCR § 916.9.1 [936.9.1] (r)(2)(D)(1-5).~~

~~The water drafting plan shall include, but not be limited to:~~

~~**1.** disclosure of estimated percent streamflow reduction and duration of reduction,~~

~~**2.** discussion of the effects of single pumping operations, or multiple pumping operations at the same location,~~

~~**3.** proposed alternatives and discussion to prevent adverse effects (e.g. reduction in hose diameter, reduction in total intake at one location, described allowances for recharge time, and alternative water drafting locations),~~

~~**4.** conditions for operators to include an operations log kept on the water truck containing the following information: Date, Time, Pump Rate, Filling Time, Screen Cleaned, Screen Conditions, and Bypass flow observations,~~

~~**5.** a statement by the RPF for a pre-operations field review with the operator to discuss the conditions in the water drafting plan.~~

~~**(3)** Intakes shall be screened in Class I and Class II waters. Screens shall be designed to prevent the entrainment or impingement of all life stages of fish or amphibians. Screen specifications shall be included in the plan.~~

~~**(4)** Approaches to drafting locations within a WLPZ shall be surfaced with rock or other suitable material to avoid generation of sediment.~~

~~**(s)** No timber operations are allowed in a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection, under exemption notices except for:~~

~~**(1)** hauling on existing roads,~~

~~**(2)** road maintenance,~~

~~**(3)** operations conducted for public safety,~~

~~**(4)** construction or reconstruction of approved watercourse crossings,~~

~~**(5)** temporary crossings of dry Class III watercourses which do not require a "Streambed Alteration Agreement" under the Fish and Game Code, or~~

~~**(6)** harvesting recommended in writing by DFG to address specifically identified forest conditions.~~

~~**(t)** No timber operations are allowed in a WLPZ, or within any ELZ or EEZ designated for watercourse or lake protection, under emergency notices except for:~~

~~**(1)** hauling on existing roads,~~

~~**(2)** road maintenance,~~

~~**(3)** operations conducted for public safety,~~

~~**(4)** construction or reconstruction of approved watercourse crossings,~~

~~**(5)** temporary crossings of dry Class III watercourses which do not require a "Streambed Alteration Agreement" under the Fish and Game Code,~~

~~**(6)** harvesting recommended in writing by DFG to address specifically identified forest conditions,~~

~~**(7)** the harvest of dead or dying conifer trees subject to the following conditions:~~

~~**(A)** Recruitment of large woody debris for aquatic habitat in Class I coho salmon bearing waters shall be ensured by retaining the ten largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones. The retained conifers shall be selected from within the area of operations that lies within 50 feet of the watercourse transition line. Where the area of operations is bounded by an ownership boundary that corresponds with~~

~~a class I watercourse, and where the WLPZ on both sides of the watercourse currently meets the stocking standards listed under 14 CCR § 912.7 [932.7](b)(2), the five (5) largest dbh conifers (live or dead) per 330 feet of stream channel length that are the most conducive to recruitment to provide for the beneficial functions of riparian zones shall be retained within 50 feet of the watercourse transition line within the area of operations.~~

~~The RPF may provide alternatives to substitute smaller diameter trees, trees that are more than 50 feet from the watercourse transition line, or other alternatives on a site-specific basis. The RPF must provide with the notice an explanation and justification why the alternative provided is more conducive to current and long-term Large Woody Debris recruitment, shading, bank stability, and the beneficial functions of riparian zones.~~

~~**(B)** Within any WLPZ, ELZ, or EEZ designated for Class II or III watercourse protection, a minimum of two dead, dying, or diseased conifer trees per acre at least 16 inches diameter breast high and 50 feet tall shall be retained within 50 feet of the watercourse transition line.~~

~~**(C)** Trees to be harvested or retained shall be marked by, or under the supervision of, an RPF prior to timber operations within the WLPZ or ELZ/EEZ.~~

~~**(D)** Within the WLPZ or ELZ/EEZ, if the stocking standards of 14 CCR § 912 [932].7 are not met upon completion of timber operations, unless the area meets the definition of substantially damaged timberlands, at least ten trees shall be planted for each tree harvested but need not exceed an average point count of 300 trees per acre.~~

~~**(u)** No salvage logging is allowed in a WLPZ without an approved HCP, a PTEIR, an SYP, or an approved plan that contains a section that sets forth objectives, goals, and measurable results for streamside salvage operations.~~

~~**(1)** This section does not apply to emergency operations under 14 CCR § 1052.~~

~~**(v)** Nonstandard practices (i.e., waivers, exceptions, in-lieu practices, and alternative practices) shall comply with the goal set forth in subsection (a) above as well as with the other requirements set forth in the rules.~~

~~**(w)** The Director may approve alternatives that provide equal or better protection for coho salmon and achieve the goal of this section.~~

~~**(1)** Any alternative proposed under this subsection for timber operations in a watershed with coho salmon shall only be included in a plan: i) after consultation and written concurrence from DFG prior to plan submittal, and ii) with a clear demonstration of compliance with the issuance criteria described under Fish and Game Code § 2081(b) as determined by DFG.~~

~~**(2)** The Director shall not accept for inclusion in a plan any alternative practice as described in this section where two or more agencies listed in 4582.6 of the PRC and 14 CCR § 1037.3 have submitted written comments which lead to the Director's conclusion that the proposed alternative will not meet the goal of this section and the agency(ies) participated in the review of the plan, including an on-the-ground inspection.~~

~~**(x)** Other measures that would effectively achieve the goal set forth in 14 CCR § 916.9.1(a) [936.9.1(a)] may be approved with written concurrence from DFG **(i)** in accordance with 14 CCR 916.6 [936.6], or **(ii)** pursuant to a coho salmon watershed evaluation for timber operations when the plan incorporates minimization and mitigation measures based on the watershed evaluation, and with written concurrence from DFG. The watershed evaluation must include the components set forth below and shall be included in addition to all other District Forest Practice Rules.~~

~~**(1)** The following are required components of a watershed evaluation:~~

~~**(A)** Description of assessment area.~~

~~**(B)** Status of coho salmon within each planning watershed in the~~

~~assessment area.~~

~~**(C)** Status of coho salmon habitat conditions and water quality within each planning watershed in the assessment area.~~

~~**(D)** Identification and prioritization of limiting factors. A reasoned analysis shall assign ratings of high, moderate and low to those factors which may individually or cumulatively limit coho salmon distribution and abundance in the watershed.~~

~~**(E)** Proposed planning watershed specific management practices to prevent or control discharges and environmental impacts from timber operations that could contribute to the identified high and moderate risk limiting factors, and; corrective actions that would reduce or eliminate the high and moderate risk limiting factors on the landscape and mitigate the impacts of timber operations which cause or contribute to those limiting factors.~~

~~**(F)** A plan and schedule for implementing proposed management practices.~~

~~**(G)** A program for monitoring implementation and effectiveness of the management practices.~~

~~**(y)** The operational provisions of 14 CCR §§ 916.9.1 [936.9.1] and 916.9.2 [936.9.2] shall not apply to a plan under which the incidental take from timber operations of Coho Salmon within the planning watershed is already authorized pursuant to the following:~~

~~**(1)** a valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code; or~~

~~**(2)** a federal incidental take statement or incidental take permit, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or~~

~~**(3)** Section 2835 of the Fish and Game Code under a valid natural community conservation plan approved by DFG.~~

~~**(z)** The operational provisions of 14 CCR §§ 916.9.1 [936.9.1] and 916.9.2 [936.9.2] shall not apply to a plan that specifies project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and DFG, which DFG has determined will avoid take of coho salmon.~~

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 and 13050(f) Water Code; and Sections 1600 and 5650(c), Fish and Game Code.

Amend 14 CCR § 916.9.2 [936.9.2] Measures to Facilitate Incidental Take Authorization in Watersheds with Coho Salmon

(a) The measures to facilitate Incidental Take Authorization in watersheds with coho salmon are intended to facilitate the process of obtaining incidental take permits for state-listed coho salmon from DFG for timber operations under the California Endangered Species Act (Fish & G. Code, § 2050 et seq.).

(b) In addition to all other District Forest Practice Rules, in any watershed with coho salmon, subsections (c) through (f) shall apply to all timber operations where DFG determines that take will, or is likely to result from such proposed timber operations, unless incidental take of coho salmon is already authorized as specified under 14 CCR § ~~916.9.1 [936.9.1](y) or 916.9.1 [936.9.1] (z).~~ 916.9 [939.9], subsection (w) as amended and effective on January 1, 2010.

(c) Class I Watercourse and Lake Protection Measures – Regulations in 14 CCR § 916.9 [936.9] as amended and effective on January 1, 2010. ~~The following shall apply to all Class I watercourses and lakes within watersheds with coho salmon.~~

~~**(1)** Within a WLPZ for Class I watercourses and lakes, sufficient trees shall be retained to maintain the preharvest level of direct shading to pools. The percentage of shade provided by Group A species shall not be reduced relative to other species.~~

~~**(2)** Recruitment of large woody debris for aquatic habitat in Class I coho salmon-bearing watercourses shall be ensured by retaining the ten (10) largest dbh conifers (live or dead) per 330 feet of stream channel length on each side of the watercourse. The retained conifers shall be selected from within the plan area that lies within 100 feet of the watercourse transition line. Where the plan boundary is an ownership boundary, a class I watercourse, and the WLPZ on both sides of the watercourse currently meets the stocking standards listed under 14 CCR § 912.7 [932.7](b)(2); the ten (10) largest dbh conifers (live or dead) per 330 feet of stream channel length within the plan area shall be retained within 100 feet of the watercourse transition line.~~

(d) Class II Watercourse and Lake Protection Measures –

(1) ~~Any timber operation or silvicultural prescription within 100 feet of any Class II watercourse or lake transition line shall have protection, maintenance, or restoration of the beneficial uses of water or the populations and habitat of coho salmon or listed aquatic or riparian-associated species as significant objectives.~~ Regulations in 14 CCR § 916.9 [936.9] as amended and effective on January 1, 2010.

(2) Where an inner gorge extends beyond a Class II WLPZ and watercourse sideslopes are greater than 55 percent, a special management zone shall be established where the use of evenaged regeneration methods is prohibited. This zone shall extend upslope to the first major break-in-slope to less than 55 percent for a distance of 100 feet or more, or 200 feet as measured from the watercourse or lake transition line, which ever is less. All operations within the special management zone shall be reviewed by a Professional Geologist prior to plan approval and disclosed and incorporated in the plan as

appropriate.

~~**(3)** The following shall apply to all Class II watercourses and lakes mapped on current 1:24,000 scale U.S. Geological Survey topographic map within watersheds with coho salmon except as provided under 14 CCR § 916.9.2 [936.9.2] (d)(3)(E):~~

~~**(A)** Inner Band: From 0-50 feet, retain a minimum of 85 percent post-harvest overstory canopy. The overstory canopy must be composed of at least 25 percent overstory conifer canopy post harvest.~~

~~**(B)** Outer Band with 0-30 percent watercourse sideslope: From 50-75 feet, retain a minimum of 65 percent post-harvest overstory canopy. The overstory canopy must be composed of at~~

~~least 25 percent overstory conifer canopy post-harvest.~~

~~**(C)** Outer Band with 31-50 percent watercourse sideslope: From 50-100 feet, retain a minimum of 65 percent post harvest overstory canopy. The overstory canopy must be composed of at least 25 percent overstory conifer canopy post harvest.~~

~~**(D)** Outer Band with >50 percent watercourse sideslope: From 50-125 feet, retain a minimum of 65 percent post harvest overstory canopy. WLPZ width may be reduced to 100 feet for helicopter or cable yarding operations. The overstory canopy must be composed of at least 25 percent overstory conifer canopy post harvest.~~

~~**(E)** 14 CCR § 916.9.2 [936.9.2] (b)(3)(B)(C) and (D) do not apply to plans in the Southern Subdistrict of the Coast Forest District or to NTMPs within watersheds with coho salmon.~~

(e) Class III Watercourse Protection Measures – Regulations in 14 CCR § 916.9 [936.9] as amended and effective on January 1, 2010. ~~The following shall apply to all Class III watercourses within watersheds with coho salmon in or adjacent to harvest units where evenaged management, rehabilitation of under-stocked stands, or variable retention~~

~~prescriptions are proposed.~~

~~**(1)** establish a minimum 25-foot-wide ELZ on each side of the watercourse for slopes less than or equal to 30% and a minimum 50-foot-wide ELZ on each side of the watercourse for slopes greater than 30%,~~

~~**(2)** retain all trees situated within the channel zone and trees that have boles that overlap the edge of the channel zone,~~

~~**(3)** within the ELZ, at least 50 percent of the understory vegetation shall be left post-harvest in an evenly distributed condition,~~

~~**(4)** within the ELZ; retain all snags, large woody debris, and countable trees 10 inches dbh or less, except where necessary to allow for cable yarding corridors, safety, or crossing construction,~~

~~**(5)** within the ELZ, prohibit initiation of any burning,~~

~~**(6)** allow cable yarding when necessary to transport logs through a Class III ELZ,~~

~~**(7)** tractor yarding is prohibited within the ELZ, except for the use of feller-bunchers and shovel yarding that minimize soil compaction and disturbance, and~~

~~**(8)** within the ELZ, retain at least 15 square feet basal area per acre of hardwoods where it exists before harvest, including the largest hardwoods available for this purpose. Retain all hardwoods when less than 15 square feet basal area per acre is present before harvest.~~

(f) Where harvesting is proposed on a connected headwall swale:

(1) Only the selection regeneration method allowed under 14 CCR § 913.2 [933.2] (a) (2) (A) or the commercial thinning intermediate treatment allowed under 14 CCR § 913.3 [933.3] (a) may be utilized in that area.

(2) Areas of ground based yarding shall be delineated on the ground as an equipment exclusion zone and marked prior to the preharvest inspection.

(3) All proposed road construction or reconstruction shall be reviewed by a Professional Geologist and disclosed and incorporated in the plan as appropriate prior to plan approval.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551.5, 21000(g), 21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 and 13050(f) Water Code; and Sections 1600 and 5650(c), Fish and Game Code.

§ 923.9.1 [943.9.1] Measures for Roads and Landings in Watersheds with Coho Salmon

In addition to all other district Forest Practice Rules, the regulations in 14 CCR §§ 923.3 [949.3] and 923.9 [943.9] as amended and effective on January 1, 2010 ~~following requirements~~ shall apply in any planning watershed with coho salmon.~~:~~

~~**(a)** Where logging road or landing construction or reconstruction is proposed, the plan shall state the locations of and specifications for road or landing abandonment or other mitigation measures to minimize the adverse effects of long-term site occupancy of the transportation system within the watershed.~~

~~**(b)** Unless prohibited by existing contracts with the U.S.D.A. Forest Service or other federal agency, new and reconstructed logging roads shall be no wider than a single-lane compatible with the largest type of equipment specified for use on the road, with adequate turnouts provided as required for safety. The maximum width of these roads shall be specified in the plan. These roads shall be outsloped where feasible and drained with water breaks or rolling dips (where the road grade is inclined at 7 percent or less), in conformance with other applicable Forest Practice Rules.~~

~~**(c)** Logging Road Watercourse Crossing Drainage structures on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and shall be fully described in the plan in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.~~

~~**(d)** Any new permanent culverts installed within class I watercourses shall allow upstream and downstream passage of fish or listed aquatic species during any life stage and for the natural movement of bedload to form a continuous bed through the culvert and shall require an analysis and specifications demonstrating conformance with the intent of this section and subsection.~~

~~**(e)** The following shall apply on slopes greater than 50%:~~

~~**(1)** Specific provisions of construction shall be identified and described for all new roads.~~

~~**(2)** Where cutbank stability is not an issue, roads may be constructed as a full-benched cut (no fill). Spoils not utilized in road construction shall be disposed of in stable areas with less than 30 percent slope and outside of any WLPZ, EEZ, or ELZ.~~

~~**(3)** Alternatively, roads may be constructed with balanced cuts and fills if properly engineered, or fills may be removed with the slopes recontoured prior to the winter period.~~

~~**(f)** In addition to the provisions listed under 14 CCR 923.1(c) [943.1(c)], all permanent or seasonal logging roads with a grade of 15% or greater that extends 500 continuous feet or more shall have specific erosion control measures stated in the plan.~~

~~**(g)** Where situations exist that elevate risks to the values set forth in 14 CCR 916.2(a), [936.2(a)] (e.g., road networks are remote, the landscape is unstable, water conveyance features historically have a high failure rate, culvert fills are large) drainage structures and~~

~~erosion control features shall be oversized, low maintenance, or reinforced, or they shall be removed before the completion of the timber operation. The method of analysis and the design for crossing protection shall be included in the plan.~~

~~**(h)** Tractor Road Crossing facilities on watercourses that support fish shall allow for unrestricted passage of all life stages of fish that may be present, and for unrestricted passage of water. Such crossing facilities shall be fully described in sufficient clarity and detail to allow evaluation by the review team and the public, provide direction to the LTO for implementation, and provide enforceable standards for the inspector.~~

~~**(i)** The operational provisions of 14 CCR §§ 923.9.1 [943.9.1] and 923.9.2 [943.9.2] shall not apply to a plan under which the incidental take from timber operations of coho salmon is already authorized pursuant to the following:~~

~~**(1)** a valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code; or~~

~~**(2)** a federal incidental take statement or incidental take permit, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or~~

~~**(3)** Section 2835 of the Fish and Game Code under a valid natural community conservation plan approved by DFG.~~

~~**(j)** The operational provisions of 14 CCR §§ 923.9.1 [943.9.1] and 923.9.2 [943.9.2] shall not apply to a plan that specifies project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and DFG, which DFG has determined will avoid take of Coho Salmon.~~

Note: Authority cited: Sections 4551, 4551.5, 4553, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513, 4551, 4551.5, 4562.5, 4562.7, 21000(g),

21001(b) and 21002.1, Public Resources Code; Sections 100, 1243 amd 13050(f), Water Code; Sections 1600 and 5650(c), Fish and Game Code; andNatural Resources Defense Council, Inc. v. Arcata Natl. Corp. (1976) 59 Cal.App. 3d 959, 131 Cal.Rptr. 172.

END